Union Calendar No. 518

86th Congress, 2d Session - - - - - - House Report No. 1193

# NINTH ANNUAL REPORT

OF THE

# ACTIVITIES OF THE JOINT COMMITTEE ON DEFENSE PRODUCTION

WITH MATERIAL ON

MOBILIZATION

FROM DEPARTMENTS AND AGENCIES

JANUARY 13, 1960.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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## JOINT COMMITTEE ON DEFENSE PRODUCTION

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## LETTER OF TRANSMITTAL

The honorable the PRESIDENT OF THE SENATE.
The honorable the SPEAKER OF THE HOUSE OF REPRESENTATIVES.

In accordance with section 712(b) of the Defense Production Act of 1950, as amended, which provides for a report to the Senate and House of Representatives from time to time concerning the results of studies of this committee, together with such recommendations as it may deem desirable, there is transmitted herewith the Ninth Annual Report of the Joint Committee on Defense Production. The appendix of the report contains summaries from various departments and agencies performing functions under authority of the Defense Production Act to October 1959.

Respectfully submitted.

PAUL BROWN, *Chairman.*
HOMER E. CAPEHART, *Vice Chairman.*

Union Calendar No. 518

86TH CONGRESS, 2d Session } HOUSE OF REPRESENTATIVES { REPORT No. 1193

# NINTH ANNUAL REPORT OF THE ACTIVITIES OF THE JOINT COMMITTEE ON DEFENSE PRODUCTION

JANUARY 13, 1960.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. BROWN of Georgia, from the Joint Committee on Defense Production, submitted the following

## REPORT

[Pursuant to sec. 712(b) of the Defense Production Act of 1950]

### INTRODUCTION

The Joint Committee on Defense Production is authorized under section 712 of the Defense Production Act of 1950, as amended, and is composed of five Members from the Senate and five Members from the House of Representatives. The committee has the responsibility of making a continuous study of the programs authorized by the Defense Production Act and of reviewing the progress achieved in the execution and administration of these programs. With the passage of Reorganization Plan No. 1 in 1958, it was concluded that mobilization and civil defense are inseparable. The reports which have been furnished to this committee by the Office of Civil and Defense Mobilization and the various departments and agencies for inclusion in the appendix of this report cover both mobilization and civil defense.

### PREPAREDNESS PROBLEMS AND THE STATUS OF DEFENSE MOBILIZATION

When the Defense Production Act was first passed in 1950, it was recognized that the then existing legislation was not adequate to meet the defense needs. The Defense Production Act provided additional authority and funds to accelerate and supplement defense programs

and the means for overcoming various types of bottlenecks. Although concepts of mobilization and defense preparedness have changed, there is a continuing need to eliminate bottlenecks and to find solutions to unresolved problems.

Shortly after the passage of the Defense Production Act it became evident from organizational changes that there was a need for more effective central direction and coordination of mobilization programs. It was under the authority of the Defense Production Act that the Office of Defense Mobilization was established by Executive order for this purpose. A new Office of Defense Mobilization was later created under Reorganization Plan No. 3. With the passage of time, and accelerated technological development, it was concluded that there was a need for more effective coordination and central direction in the broad areas of preparedness relating to defense supporting activities and nonmilitary defense. The Office of Defense Mobilization and the Federal Civil Defense Administration were combined into an Office of Civil and Defense Mobilization in an effort to achieve this result.

In the early operations the Office of Defense Mobilization relied upon emergency agencies to administer many of the mobilization programs. It became increasingly evident that mobilization activities were very closely related to the normal activities of the departments and agencies. In assigning mobilization responsibilities to departments and agencies, the Government sought to utilize the specialized knowledge of qualified personnel in each department and agency to carry out both the normal functions of Government and closely related mobilization activities. Government witnesses who have testified before this committee have stated consistently that this method of delegating preparedness responsibilities offers the most practical means of finding solutions to unresolved problems to meet future emergencies. Since there are few basic resources which are used exclusively for military purposes or exclusively in the civilian economy, the closest coordination of military and civilian programs and requirements is necessary. Distinctions through the use of such terms as "defense" and "defense supporting" have become less meaningful. Both "defense" and "defense supporting" functions are essential parts of an adequate preparedness effort. For example, BDSA, within the Department of Commerce, utilizes about one-half of its time in defense supporting activities, such as establishing priorities for the IRBM, ICBM, and satellite programs, expediting the delivery of defense materials in short supply such as steel and copper, and insuring that current defense and atomic energy production and construction remain on schedule. Yet, this defense supporting activity relates directly to the timely delivery of defense items, which is highly essential to defense. This example also illustrates the manner in which technical personnel within the departments and agencies may utilize their knowledge in a specialized field in support of defense programs. Our defense programs have similar support in specialized fields in other departments and agencies; however, the percentage of the total effort devoted to defense supporting activities would generally be less than that of the agency cited above. Reports from the following departments and agencies which have made important contri-

butions in support of defense efforts are set forth in the appendix of this report:

Office of Civil and Defense Mobilization.
Department of Agriculture.
Air Coordinating Committee.
Atomic Energy Commission.
Civil Aeronautics Board.
Civil Service Commission.
Department of Commerce.
Department of Defense.
Export-Import Bank.
Federal Aviation Agency.
Federal Home Loan Bank Board.
Federal Reserve System.
General Services Administration.
Department of Health, Education, and Welfare.
Housing and Home Finance Agency.
Department of the Interior.
Department of Labor.
Small Business Administration.

The objective of the mobilization program continues to be one of providing for the national defense and the national security. The achievement of this objective is dependent upon preparedness measures which are sufficiently flexible to meet any emergency which could occur. This committee has previously stated that so long as limited scale war is the most probable type of conflict, the traditional functions of mobilization should not be deemphasized.

It has been pointed out previously that the United States has adopted as national policy the placing of primary reliance, in the event of general war, on a strong retaliatory capability. The effectiveness of a strong retaliatory capability appears to be that of preventing general war or a nuclear attack on this country and to strengthen our position in the event of limited scale war.

Most shortages for basic raw materials in past years have been overcome, but increased emphasis must be placed on conducting research to provide metals which possess the desired weight and properties for missiles and space vehicles. During the past year the committee has conducted a study of the anticipated requirements of high energy fuels as compared with the supply. Although the reports from both the Government and industry have been encouraging with respect to the supply of high energy propellants currently in use or planned for the near future, it is important that research programs continue without delay toward the development of higher energy propellants. The performance of both missiles and space vehicles, as evidenced by range and payload, are closely related to new developments in metals research and propellant research.

Since the Defense Production Act was first passed in 1950, many bottlenecks have been overcome and our increased productive capacity and the large stockpile of materials assure a more rapid mobilization for limited-scale war. Defense Production Act contracts covering transactions of $7.6 billion provided incentives for increased production. In addition, current planning for production emphasizes industrial readiness for immediate adjustment to accelerate production in

the event of limited-scale war. In terms of preparedness to meet the needs of the population in the event of a nuclear attack on this country, the task is so all inclusive and the problems are so vast that our current plans and programs could well be described as blueprints for survival. Yet, much effort has been devoted to developing mobilization plans and programs, and expenditures in the past year have been very small in comparison with other defense costs. The people who have attempted to resolve the many preparedness problems, some of which have seemed almost insurmountable, deserve credit for their continuing efforts to find solutions to these problems.

In the 9-year period since Korea, the value of military supplies and equipment delivered plus the value of military construction put in place is estimated at $185.8 billion. Of this amount, $141.7 billion was for hard goods, $26.4 billion for soft goods, and $17.7 billion for construction.

In the fiscal year 1959, it is estimated that $20 billion of military supplies and construction were delivered or put in place, including $15.4 billion for hard goods, $2.6 billion for soft goods, and $2 billion for construction. The estimated total of $20 billion for the fiscal year 1959 compares with $19.5 billion for the fiscal year 1958, $19.2 billion for the fiscal year 1957, $18.7 billion for the fiscal year 1956, $21.2 billion for the fiscal year 1955, $26.2 billion for the fiscal year 1954, $28.4 billion for the fiscal year 1953, $23.2 billion for the fiscal year 1952, and $9.4 billion for the fiscal year 1951.

In the fiscal year 1959 the estimated value of military supplies and construction was 2.6 percent more than in the fiscal year 1958, with hard goods deliveries up 0.6 percent, soft goods up 9 percent, and construction up 11 percent. In the hard goods category changes in the value of deliveries ranged from an increase of 64 percent in guided missiles to a decrease of 45 percent in production equipment. Substantial increases also occurred in ships (38 percent), combat vehicles (30 percent), and all other hard goods (23 percent). There was a decrease of 33 percent in ammunition, a decrease of 30 percent in weapons, and a decrease of 15 percent in aircraft. Noncombat vehicles declined 9 percent and electronics and communications equipment declined 3 percent. Dollarwise, the decrease of $1.2 billion in aircraft was the largest and this was offset by the increase of $1 billion in guided missiles.

The downward trend in number and airframe weight of aircraft accepted, which was evident in the fiscal year 1958, continued in the fiscal year 1959, but the average cost per plane was higher. Airframe weight acceptances decreased from 76.8 million pounds in 1958 (fiscal year) to 58 million pounds in 1959 (fiscal year), a decline of 25 percent.

The Department of Defense reports favorably on the continued operation of the Defense Materials System under title I of the Defense Production Act. These procedures are so devised as to require no change to give priority to increased military procurement in a limited war situation; the necessary modifications are ready and self-triggering in event of an attack on this country. The Department of Defense reports that the continuation of DMS priorities as an integral part of Department of Defense procurement eliminates the

estimated administrative leadtime of 18 months for reimposition of a materials control system.

The Business and Defense Services Administration, Department of Commerce, previously reported that BDSA had undertaken a complete revision and simplification of the DMS regulations which have been in effect for approximately 6 years. The revised defense materials system will continue to support the military and atomic energy programs; however, an effort has been made to simplify the DMS regulations in order to eliminate considerable paperwork for a large number of contractors.

The new Department of Defense industrial readiness planning program (DOD Instruction 4005.15, July 14, 1959) provides the authority and the procedures for the military departments to plan with industrial management. The Department of Defense reports that flexibility in procedures and a variety of systems under the new planning program allow the departments an opportunity to save maximum amounts of leadtime for the planning effort expended. It is stated that the mandatory procedures assure coordination in planning which will prevent conflicting demands on industry in an emergency and the delays caused by obtaining higher priorities and production directives will be eliminated where planning has been thoroughly applied. The new industrial readiness planning program is aimed at reducing the time between decision by a procuring department to acquire new materiel and delivery of the first item to the military supply system. Some of the phases in which it is reported that time would be saved under this program are as follows:

1. Administrative leadtime: Contract will be awarded to planned producer. A preaward survey to assure capability is unnecessary and comparison and choice between unknown sources is eliminated.

2. Management leadtime: By advance planning industrial management will have already decided on the production processes and techniques to be used. The inspection and quality control system having been considered in advance and the production techniques having been previously tested will prevent initial delivery delays.

3. Subcontract leadtime: Planning having been extended to key subcontractors and suppliers eliminates the prime contractors leadtime in seeking and having approved his choices for subcontract and supply items. Similarly, production leadtime in the subcontractor's plan is reduced in the same way it is reduced in the prime contractor's plant.

The Department of Defense believes that in an emergency an average of nearly 7 months could be saved in administrative leadtime alone. Production leadtime varies from 3 weeks to 18 months, and it is estimated that savings through planning can reduce this an average of 50 percent.

## Committee Hearings, Staff Studies, and Reports

The Joint Committee on Defense Production conducts a continuous review of mobilization programs. These reviews include testimony from witnesses, quarterly reports from departments and agencies hav-

ing responsibilities related to mobilization and preparedness, and reports on specific subjects. Each department and agency performing mobilization functions also submits a report of its activities for inclusion in the appendix of the annual report of this committee from year to year. Under the direction of your chairman, the committee staff has assisted the committee in conducting studies and compiling information on preparedness programs. These hearings and some of the staff studies and reports are summarized under the headings which follow:

### DEFENSE PRODUCTION ACT INVENTORIES—HEARING

On May 29, 1959, the Joint Committee on Defense Production received testimony in executive session from the Director of the Office of Civil and Defense Mobilization and the Administrator of the General Services Administration on Defense Production Act inventories. The purpose of the hearing is revealed in the opening statement of the Chairman, which was released at the conclusion of the hearing. The opening statement of the Chairman follows:

> The Joint Committee on Defense Production has the responsibility of reviewing programs authorized by the Defense Production Act. Since this Committee was created, in 1950, we have attempted to advise with officials in the executive branch of the Government with respect to problems relating to production and materials. For several years these problems related largely to shortages. At the present time the total quantities in all Government inventories for many materials are in excess of defense needs as measured by revised stockpile objectives.
>
> An excess of certain materials may accumulate in the Defense Production Act inventory for many reasons, including changes in uses of materials, the development of substitutes, a reduction in stockpile objectives, a lack of funds in the stockpile with which to purchase materials in the Defense Production Act inventory, deliveries of increased quantities of materials under "put" options in contracts under adverse market conditions, the purchase of materials under Public Law 206, or the overexpansion of facilities.
>
> The total quantity of materials in the Defense Production Act inventory and in transit as of March 31, 1959, amounted to $1,328,389,352 at cost. It is my understanding that under existing stockpile objectives a very small percent of this amount could be sold to the stockpile. In addition, it was estimated on March 31, 1959, that future deliveries to the DPA inventory would amount to $590,228,000.
>
> As you know, much has been said and written in recent weeks about possible sales from the Defense Production Act inventory. I thought that this Committee should invite Gov. Leo A. Hoegh, Director of the Office of Civil and Defense Mobilization, and Mr. Franklin G. Floete, Administrator of the General Services Administration, to meet with the Committee and discuss the problems which relate to the Defense Production Act inventory.

On May 13, 1959, I wrote the Director of the Office of Civil and Defense Mobilization and requested that this Committee be advised of proposed sales of any material in the Defense Production Act inventory, currently and in the future. I also stated that the Committee would appreciate receiving a statement on the current policy on the sale of materials in the Defense Production Act inventory, and being advised of any future changes in the policy.

We are interested in knowing whether current stockpile objectives reflect current defense needs, the possibility of there being increased requirements in the stockpile for DPA inventories, the safeguards which will be followed in not upsetting market prices should materials be offered for sale from the DPA inventory, and the current plans and policies relating to the DPA inventory.

In a letter dated May 13, 1959, to the Director of the Office of Civil and Defense Mobilization, the Chairman had requested that the Joint Committee on Defense Production be advised of proposed sales of any material in the Defense Production Act inventory. He also requested that the committee be furnished a statement on the current policy of OCDM on the sale of materials in the Defense Production Act inventory, and that the committee be advised of any future changes in this policy. The reply of the Director of OCDM was furnished to the committee at the time of the hearing and released on the same date. The letter of the Chairman and the reply of the Director of OCDM follow:

CONGRESS OF THE UNITED STATES,
JOINT COMMITTEE ON DEFENSE PRODUCTION,
*May 13, 1959.*

HON. LEO A. HOEGH,
*Director, Office of Civil and Defense Mobilization,*
*Executive Office of the President, Washington, D.C.*

DEAR GOVERNOR HOEGH: I have received communications from three members of this committee regarding the sale of materials from the Defense Production Act inventory. Specific reference was made to a recent proposal to sell a quantity of copper out of the D.P.A. inventory.

The point has been made that proposed sales may adversely affect the market price of materials, and reference was made to the fact that a Senate resolution was passed opposing the proposed sale of copper.

As you know, the Joint Committee on Defense Production has the responsibility of making a continuous study of the programs authorized by the Defense Production Act and of reviewing the progress achieved in the execution and administration of such programs.

In line with the responsibilities of this committee under the Defense Production Act, it is requested that this committee be advised of proposed sales of any material in the Defense Production Act inventory, currently and in the future.

I would also appreciate receiving a statement on the current policy of your office on the sale of materials in the Defense Production Act inventory, and being advised of any future changes in this policy.

Sincerely yours,

PAUL BROWN, *Chairman.*

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF CIVIL AND DEFENSE MOBILIZATION,
OFFICE OF THE DIRECTOR,
*Washington, D.C., May 29, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Washington, D.C.*

DEAR MR. CHAIRMAN: This is in reference to your letter of May 13 regarding disposal of materials from Defense Production Act inventories.

In accordance with your request we will be pleased to arrange that your committee be notified of proposed sales of any material in the Defense Production Act inventory.

General policy on disposal of strategic and critical materials, including materials to be sold from the Defense Production Act inventory, is set forth in Defense Mobilization Order V–7, which states that "strategic and critical materials shall be retained in Government inventories so long as they are needed to meet maximum stockpile objectives or any foreseeable increases in such objectives.

"Disposals of excesses shall be undertaken only if they do not cause serious economic disruption or adversely affect the international interests of the United States."

Disposals from the Defense Production Act inventory are subject also to the policy in Defense Mobilization Order V–3 that "generally where the sale of surplus materials acquired under the Defense Production Act is undertaken and the quantity is substantial in relation to annual market consumption, such disposal will be made only after public announcement, well in advance of disposal, of (*a*) the total quantity to be sold, (*b*) the markets in which the material will be offered, (*c*) the minimum market price or prices that must prevail at the time of sale, and (*d*) the maximum amounts that will be offered for sale in each calendar quarter or other appropriate period."

Although policy on disposal is being reviewed, we have no present plans for changes of the policy.

Sincerely,

LEO A. HOEGH.

## OFFICE OF CIVIL AND DEFENSE MOBILIZATION—HEARING

On August 18, 1959, Gov. Leo A. Hoegh, Director of the Office of Civil and Defense Mobilization testified before the committee on the overall mobilization activities of OCDM and the programs of the departments and agencies having delegated responsibilities.

In an opening statement the chairman pointed out that the committee is interested in the progress which has been achieved in advance preparedness to meet emergencies and in the problems which must be resolved in order to be adequately prepared to meet emergencies which could occur. The Director of OCDM was asked to outline the activities which are being carried out to give meaning to the national plan and the manner in which human effort and resources are to be utilized, and bottlenecks overcome, in order to achieve preparedness for any foreseeable emergency.

The Director of OCDM stated that the national plan for civil and defense mobilization was promulgated by the President in October 1958. This plan sets forth objectives and the manner in which these objectives are to be attained. There are 41 annexes to the national plan, and on the date of the hearing approximately 50 percent of them had been completed. It was anticipated that the remainder of the annexes would be completed by January 1, 1960.

The Director of OCDM outlined the development of the national manpower plan as an example of the type of procedure which has been followed. In developing the manpower plan, OCDM consulted

with the Department of Labor, Selective Service, the Civil Service Commission, and the Defense Department. When it felt that a workable plan had been developed it was passed on to local government representatives and State government representatives for their comments and recommendations. In addition, it was submitted to a management advisory committee and to a labor advisory committee for their comments and recommendations. The final manpower plan had the approval of State and local governments and the Federal Government. It was stated that this is the general procedure which is followed to develop each of the annexes.

The Director of OCDM stated that he had placed the ceiling at 1,750 people to coordinate and direct civil defense and defense mobilization activities throughout the Nation. He stated that there must also be a capability at the local level and the State level. Governor Hoegh expressed the view that mayors and Governors should have adequate staffs to give proper advice in the event of a nuclear attack. He further stated that until we establish that capability we will never be able to say that we have an effective, strong civil defense and defense mobilization in the Nation. He expressed the view that the enactment of Public Law 85–606 was a forward step and that $12 million was being requested for implementation. OCDM has asked State legislatures to enact laws to provide for lines of succession of key personnel; preservation of essential records; alternate sites for Government control; and to make maximum use of Government personnel, resources, and facilities at every level. It was stated that this measure was introduced in 41 State legislatures and that 32 States had enacted legislation.

After the Congress provided funds for the purchase of more radiological instruments last year, OCDM placed radiological instruments into 7,500 high school science classes throughout the country. During that period 1 million students in the science classes of our high schools received training in the principles of radiological defense. This program has a dual purpose. The student is informed about nuclear weapons and the effects, detection, and what one must do for protection. In addition, information is disseminated into the homes. Two training centers were established in the year prior to this hearing, one on the east coast and one on the west coast. State and local government personnel and civil defense personnel receive instructions as to their proper functions and the roles they must execute should there be a nuclear attack.

It was stated that 47 States and Puerto Rico have completed survival plans, 243 metropolitan areas have completed their plans, and that plans have been completed in 2,100 communities. Governor Hoegh expressed the view that we need 150,000 fixed monitoring stations. On the date of the hearing there were 15,000 stations, 1,000 of which are manned by Federal personnel. The other 14,000 stations are manned by State and local government personnel. The objective of OCDM is to have 144,000 radiological fixed monitoring stations manned by government and local personnel and 6,100 manned by Federal personnel. Due to lack of funds the Director of OCDM anticipates that in the year following the hearing the number of monitoring stations will be approximately 20,000 instead of 50,000.

Governor Hoegh stated that after study and research OCDM had concluded that the single best civil defense function for the saving of the most people is to provide for fallout shelter. He stated that he had never advocated that the Federal Government should build these shelters, but that the Federal Government should give guidance and example. He stated that OCDM will spend $2.5 million during the next year in order to give the people some examples. Shelters will be built in homes, adjacent to homes, first floors, basements, in conjunction with the highway program, and in conjunction with existing buildings and structures.

The Director of OCDM submitted the following statement on stockpile policy and the proposals being considered in connection with the management of Government inventories of materials:

STATEMENT OF LEO HOEGH, DIRECTOR, OFFICE OF CIVIL AND DEFENSE MOBILIZATION

Mr. Chairman, this afternoon I will present a brief outline of our stockpile policy.

The stockpiling of strategic materials began because the United States is deficient in many natural resources which it would need to meet emergency requirements. The Stockpiling Act passed in 1946 refers to the deficiency of supplies to meet the industrial and military needs of the country for defense.

There are 75 materials now on the official stockpile list. About a third of that number are not produced at all in this country, or only in insignificant quantities. Only three of them—molybdenum, magnesium, and vanadium—are available in such quantities as to make the United States wholly self-sufficient under peacetime conditions.

The stockpile has been accumulated as an industrial materials inventory, rather than as an end-product stockpile. Thus, it contains minerals, metals, industrial oils, fibers, and such other agricultural materials as crude natural rubber and gum opium. All are basic to manufacturing, but not directly usable by the ultimate consumer.

Strategic stockpile objectives for each of the materials included in the stockpile as originally established were on a 5-year basis, that is, they were based on meeting the deficit in supply of each material in relation to the requirements for a 5-year mobilization period. In 1954, following review by a Cabinet committee, long-term objectives were added which completely discounted for a 5-year period supplies originating beyond North America and comparable accessible areas. The 1-year rule also was introduced in 1954 which provided that when a metal or mineral is declared to be strategic and critical, the long-term stockpile objectives shall not be less than 1 year's normal U.S. use.

Early in 1956, all cash purchasing for the strategic stockpile was limited to meeting needs for a 3-year emergency period. On June 30, 1958, stockpile objectives were adjusted to meet a 3-year deficit of supply, thereby eliminating the 5-year objectives and the 1-year rule. The action followed

an extensive review of the whole program including a review by the special stockpile advisory committee (the Pettibone committee). This committee was made up of people outside the Government.

Subsequent to their recommendations, a policy paper, Defense Mobilization Order V–7, was issued. I believe that you have been furnished this paper but I have here a copy which can be reproduced in the record if you wish.

"Current policy provides that disposals will be undertaken only if the materials are in excess of the maximum stockpile objectives and foreseeable increases of such objectives, and if the disposals will not cause serious economic disruption or adversely affect international interests of the United States."

It should be emphasized that the strategic stockpile deals with meeting industrial needs, basic not only to military requirements, but to sustaining the entire essential economy.

As you will note from the policy paper I just referred to, stockpile objectives are two—"basic" and "maximum" objectives. Both are determined by estimating the deficit in supply over requirements for military, defense supporting, essential civilian, and essential exports to our allies. The last—exports—is included if the United States is the normal source of supply and alternate sources would not be available.

The basic stockpile objective represents the deficit after allowing for U.S. production and imports from world sources, the latter being discounted in varying degrees according to estimated strategic risks involved.

The maximum objective is computed in the same way, except that imports only from nearby areas, such as Canada, Mexico, and Cuba are included.

Currently, all cash procurement for the stockpile is limited to meeting the basic objectives.

In order to establish a basis for estimation of stockpile objectives, current guidance provides for calculating deficits for limited war and for general war and for using the larger deficit as an indication of the objective needed. Generally, a stockpile for a limited war would be adequate to meet the needs for a period following a nuclear attack on the United States. However, for some materials the objectives so computed may not be adequate.

One of our important current activities is to determine the role of stockpile materials in relation to general war with nuclear attack, including the problem of postattack recovery.

While both supply and consuming facilities for the materials would suffer severe damage from nuclear attack, the availability of basic materials would play a major role in getting the wheels of industry turning again after attack.

In addition, rapidly changing technology may result in new requirements for high-temperature alloys and other special purpose materials. Arrangements have been made with responsible agencies to follow these developments

closely. It may be necessary to make allowance in the objectives to meet new demands for these purposes.

Some effort has been made since 1954 to be prepared for at least the principal hazards of nuclear warfare. This has necessarily been somewhat limited due to not having all the necessary data. Since 1954 the stockpile factoring guidance has called for an adjustment for overconcentration of materials supplies in domestic areas; in addition, some upgrading of the stockpile has been undertaken and has been intensified in the past year to bypass potential bottlenecks of supply. We are now actively engaged in studying the basic needs for nuclear war with the Department of Defense. The problem of developing military requirements under this condition is new and difficult, and of course the requirements of postattack recovery must be included. We are breaking new ground here and we hope this study will be finished in approximately 1 year.

The condition of the stockpile is good.

For the 75 materials now on the list, 69 basic objectives and 57 maximum objectives can be considered fulfilled.

The basic objectives so far not met by total Government inventories are for amosite asbestos, the cordage fibers—abaca and sisal—small diamond dies, jewel bearings, and selenium. Because of indications of improved supply requirements relationships for some of these materials, the procurement program toward basic objectives this year may include only three: Amosite asbestos, diamond dies, and jewel bearings.

We are considering asking Congress for some new legislation designed to make the management of all the materials in Government inventories more flexible and businesslike. As you know, the Government has such materials in the strategic and critical materials stockpile, in the Defense Production Act inventory, in the supplemental stockpile, and in the CCC inventories. No changes have been made in the legislation affecting the management of the materials in the strategic and critical materials stockpile for many years. The management arrangements, particularly that for disposal of material no longer needed for national defense, is cumbersome and sometimes prevents doing a good job.

For example, early in 1957 it was decided that long staple cotton was no longer necessary for mobilization requirements, and it was decided to dispose of this cotton. Market conditions at that time were such that disposal of some of the cotton could have been accomplished if done promptly. Approval of disposal was requested from Congress in accordance with existing legislation, but by the time the requested legislation to dispose of about 50,000 bales out of a total of 270,000 bales was obtained, so much time had elapsed that the market had weakened. Consequently, to this date only some 9,000 bales have been sold. Similarly, we recently declared coconut oil no longer a strategic material for defense. The military formerly used this material in incendiary bombs

and flamethrowers but have since developed new and better substitutes. We would like to dispose of this coconut oil promptly because market conditions are very favorable to do so now. There has been a drought in the Philippines, the main source of this oil, for two growing seasons. Industry would like to have some of the oil put on the market.

We are asking Congress for special legislation waiving the 6 months' waiting period now required under the Stockpiling Act.

These are two illustrations of why we believe new legislation would be in the best interest of the Government. We have not as yet completed the proposed legislation but it is under consideration by various Federal agencies and we hope that we will be able to submit it to Congress in the near future.

There has been some talk recently in the press and in some parts of Congress that the Government has very substantial excesses of materials over its requirements. There are excesses in some of the inventories; however, I believe the discussions of the amounts have exaggerated the situation. It is not practical at this time to measure the excesses in the inventories above requirements precisely because, as I previously stated, we cannot do this until we have a better idea what the requirements will be to meet nuclear war including postattack recovery. We have nevertheless made some analysis of the existing inventories with the data at hand.

I believe you know that all Government inventories have an acquisition cost of $8.1 billion. Part of this amount is estimated, for some of the materials were not purchased but were transferred to the stockpile from the Government-owned Reconstruction Finance Corporation and other Government agencies. About $700 million of these materials are nonspecification grade which have a relatively low market value. We estimate that the current market value is slightly over $7 billion for all materials in Government inventories. The material that might be considered excess we believe to be between $2 and $3 billion out of this total of $7 billion. This again would be subject to the previous qualification that until we have worked out better the requirements for nuclear war and postattack recovery, no precise figure can be developed. Any disposal of any part of this excess would have to be in accordance with present policy of not disrupting usual markets and would, in the case of strategic and supplemental stockpiles, require approval of Congress.

### DEPARTMENT OF COMMERCE—HEARING

On August 18, 1959, Mr. Horace B. McCoy, Administrator of the Business and Defense Services Administration, Department of Commerce, testified before the committee on the mobilization program of BDSA.

Mr. McCoy stated that the defense materials system is being operated as a priority system for the military and atomic energy procure-

ment and construction. The system is limited to only defense procurement at the moment, but the system is capable of being expanded overnight to meet any requirements of Government for the control of production resources. A simplification of DMS has been undertaken recently. The simplification eliminates paperwork for a large number of subcontractors. The mandatory identification of defense orders will provide better information on the impact of current defense and AEC programs. This enables BDSA to have in being at all times a rather precise knowledge of how much of our industrial resources and materials is going into the military and AEC programs, including the space program. BDSA also carries out a special assistance phase under which about 2,000 specific requests are handled annually to expedite some procurement process. Mr. McCoy stated that many of the procurement schedules of the military and of the AEC, particularly with regard to ballistic missiles and space programs, are rather urgent in that they call for materials not normally produced or which are not shelf items. Therefore, it has been necessary to place the orders not only with the prime contractors, but with their subcontractors. The special assistance feature is used to get the production schedule to match up with the delivery schedule.

With respect to the steel strike, letters were sent to 110 companies that were still operating, reminding them of obligations under the defense materials system. Telegrams were sent to 98 steel companies asking for weekly reports on orders accepted under the defense materials system. In the operation of the system BDSA suggests a set aside of a certain portion of a mill's production that must be held within leadtimes to meet rated orders. This set aside would not be disposed of until after the time has passed to receive high priority orders.

The Administrator of BDSA stated that freeze orders on warehouse stocks held in inventories had not been issued. It appeared on the date of the hearing that warehouse inventories would be depleted at the rate of about 175,000 tons a week, and the warehouse inventories were then estimated at 3 million tons. BDSA will issue directives whenever needed to assure fulfillment of high priority defense contracts. The defense materials system may also be used to expedite procurement at the end of the strike. As mills resume production, a large portion of that production will go to the military, Atomic Energy, and the Space Agency to expedite the recovery of the defense program.

BDSA recently issued emergency delegation No. 1. This delegation is effective in the event of air attack upon the United States and in the event that communication with the Central Government is not possible, and would authorize the regional production representative of BDSA to exercise all the authorities contained in title I of the Defense Production Act except those that belong to other agencies. In the event a BDSA production representative is not available in any of the regional offices, the authority would be exercised by the Assistant Director of Resources and Production of OCDM.

The executive reserve of BDSA has been expanded and they have been assigned to local operations and to the headquarters in each of the eight regional offices of OCDM. There were 1,200 executive reservists on the date of the hearing. Important production records and

survival item production data and much other data is being sent to the eight regional offices of OCDM. Industrial resource information will be available in Washington, the eight regional offices throughout the country, and in one central depository outside of Washington. Executive reservists become Federal employees when they report for duty either on a without-compensation basis or on a per diem basis.

Surveys of approximately 200 survival items have been conducted with the view of determining availability and production capability now and in time of an emergency.

The Director of BDSA stated that this agency had reviewed all of the materials in the stockpile within the previous 12 months, and he made the following statement with regard to excesses:

> Our own feeling about this matter is that, where we have excesses either of specification grade materials or subspecification materials, that we should dispose of these excesses if they are not necessary for the purpose originally conceived, that is, to carry this Nation over a period of national emergency.
>
> It seems to me that it is quite possible to dispose of these excesses as they occur or when they are determined to be in excess in an orderly manner over a long period of time without disruption of the markets.
>
> I thoroughly believe this can be done without disrupting prices or orderly operations of commercial business, and while I am speaking for my own agency now and not that of the Government as a whole, this happens to be our belief in working for some years with these materials.

With regard to funds, Mr. McCoy stated that it is difficult to distinguish between mobilization activities and industrial studies, and that BDSA has this delegation because their kind of mobilization work is very closely allied and affiliated with their normal work. He expressed the belief that consideration should be given to including mobilization work in with the regular budget rather than to request separate appropriations.

### REPORT OF COMPTROLLER GENERAL TO COMMITTEE

COMPTROLLER GENERAL OF THE UNITED STATES,
*Washington, D.C., September 15, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production, U.S. Congress.*

DEAR MR. CHAIRMAN: At the request of Mr. Harold Warren, General Counsel for your committee, representatives of the General Accounting Office met with Mr. Warren on August 27, 1959, to discuss the actions we have taken relative to recommendations by your committee that we examine certain aspects of the use of Government-owned tooling by contractors for the Department of Defense. The Eighth Annual Report of your committee, issued January 9, 1959, recommended that the General Accounting Office review defense procurement contracts to determine: (1) Whether negotiation procedures under defense contract procurements are adequate to assure that no undue competitive advantage is conferred on one contractor over an-

other through the use of Government tooling; (2) that the Government has received proper consideration for the use of the tools; and (3) that a statement specifying the periodic amount of rental to be paid has or has not been included in the contract.

As we informed Mr. Warren, we have reviewed the circumstances under which a number of defense contractors have been permitted to use Government-owned tooling in the performance of their commercial work. These reviews have resulted in two reports to the Congress to the effect that rent was not being received by the Government even though the two contractors involved were making substantial use of the Government tooling on non-Government work. In several other examinations not yet concluded, we have found indications that rentals for commercial use of Government tooling have not been received or have been insufficient. If these indications are borne out by all of the facts, reports on these reviews will be submitted to the Congress.

In connection with our regular program for auditing defense contracts, we have reviewed the price analyses preceding many contract negotiations. In these reviews we have noted that such analyses, if properly performed, include consideration of estimated tooling costs and should thus disclose any unwarranted charges where tooling was being furnished by the Government. We have noted also that the Armed Services procurement regulation requires contracting officials to assure that authorizing the use of Government facilities, including tooling, does not place a contractor in a favored competitive position and that the Government receives adequate consideration for the use of the facilities. Our audits of negotiated defense contracts have disclosed no instances in which it could be shown that these requirements were not observed.

In view of the committee's interest, the General Accounting Office is presently preparing a program for more intensive reviews of contractors' use of Government-furnished tooling with particular emphasis on the adequacy and effectiveness of controls exercised by the military departments to assure that the use of such tooling does not give one contractor a competitive advantage over another and that adequate rental or other consideration is received by the Government for use of the tooling. We plan to bring to the attention of your committee the results of our examinations under this program.

Sincerely yours,

JOSEPH CAMPBELL,
*Comptroller General of the United States.*

### STUDY OF REQUIREMENTS FOR HIGH-ENERGY FUELS

In passing the Defense Production Act in 1950, the Congress made provision in section 303(a) for purchases of or commitments to purchase metals, minerals, and other raw materials, including liquid fuels, for Government use or resale. The language was broadened with the passage of the Defense Production Act Amendments of 1951, and made provision for purchases of or commitments to purchase metals, minerals, and other materials for Government use or resale. The stated purpose for broadening the language was to enable the Government to procure needed materials for the mobilization program.

At the direction of the committee, the staff conducted a study of

the supply situation of propellants. The committee staff interviewed numerous experts in and out of the Government, including officials in the Department of Defense (and the Advanced Research Projects Agency), the Department of Commerce, the Office of Civil and Defense Mobilization, the National Aeronautics and Space Administration, Army, Navy, Air Force, and Applied Physics Laboratory of Johns Hopkins University, and numerous officials in four companies engaged in the manufacture or use of propellants. The report which was prepared by the committee staff is a classified report.

This study covered nonstorable liquid propellants, storable liquid propellants, and solid propellants. Although there may be shifts in emphasis among the different types of propellants, it is indicated that there will be uses for these three types of propellants in the foreseeable future. Since the advantages and disadvantages of propellants must be measured in terms of specific applications, it is not possible to say that one type of propellant is better than another for all purposes. Each of the three types of propellants has some superior qualities for certain applications. Today, increased emphasis is being placed on solid propellants in the missile field although nonstorable liquids are of major importance in powering the principal engines for IRBM's, ICBM's, and space vehicles. Storable liquid propellants offer possibilities of increased use for both space vehicles and missiles.

An accurate forecast of future propellant needs first requires some assessment as to the uses of solids, nonstorable liquids, and storable liquids. Yet, this situation has been described as being similar to the early days of automobile development when the comparative merits of the internal-combustion engine and the steam engine required many years to finally assess.

Many factors must be weighed in determining which propellant will provide the best overall performance for a particular use. For example, present knowledge of known chemicals and combinations of chemicals indicates that the highest energy is obtainable from liquefied gases. However, the time-consuming difficulties in handling tend to restrict the use of nonstorable liquid propellants in military applications which require a state of instant readiness. In space programs there would not be the same strategic requirement for instant readiness; and the extra energy available in liquid propellants could be utilized to propel space vehicles at higher velocities, carry increased payloads, and at the same time provide greater flexibility in a cutoff or restarting of the engine. Solid propellants do not offer the same flexibility for inflight throttling and restarting on command, provide less energy than nonstorable liquids; but possess high reliability, instant readiness, simplicity in field servicing, compactness, and require minimum maintenance. Mobility is also a factor to be considered in the use of solids. Although solid propellants are more easily stored than liquid propellants, storable liquid propellants are being developed to obtain ready-to-fire reliability somewhat comparable to solid propellants.

The information obtained indicates that no regular procedure has been established for estimating fuel requirements on a continuous basis, but that these estimates are made from time to time. Since August 1954, the Department of Defense has conducted six surveys to determine estimated requirements for certain selected propellants.

The Office of Civil and Defense Mobilization looks to the Department of Defense to coordinate the propellant requirements for all Government projects undertaken, whether for military or nonmilitary purposes. This includes the requirements of the military services, the Advanced Research Projects Agency, and the National Aeronautics and Space Administration. The requirements for propellants compiled by the Department of Defense are submitted to the Office of Civil and Defense Mobilization. At the request of OCDM, the Business and Defense Services Administration, Department of Commerce, conducts studies to determine the ability of industry to meet these requirements and the additional requirements in the commercial market.

The officials interviewed appeared to be in general agreement in their opinions as to the high-energy propellants which will be required for military and nonmilitary purposes in the foreseeable future. In this study an effort was made to determine whether there would be an adequate supply of fuels and oxidizers under conditions requiring the maximum quantities. Requirements are generally lower for mobilization needs than for peacetime needs. This is due to the fact that large quantities of fuel are required in connection with research and development programs.

The requirements for propellants would generally be known far in advance of actual use. Since each missile is built around a particular fuel, there is opportunity to plan for the required supplies of fuel at the time a missile program is finalized in the Department of Defense. Generally the leadtime for missiles would be much longer than the time required for the construction of facilities to manufacture the fuel.

Research contracts are being financed by the Advanced Research Projects Agency, Department of Defense, in an effort to find new chemical compounds to provide higher performance for solid propellants. This research and development program is being carried out through 4 major contractors and approximately 40 smaller contractors. The objective is to increase the specific impulse, which could be significant in terms of range and warhead capacity.

The requirements for propellants will be subject to such further review as may be required by future conditions and developments.

### PROBLEMS RELATING TO HIGH-TEMPERATURE METALS RESEARCH

In providing for the national defense and security strong reliance must be placed upon missiles and other modern weapons, space vehicles, and atomic energy programs. Technological progress in these areas is highly dependent upon the development and improvement of materials to withstand extreme temperatures, pressures, and corrosive conditions.

The Department of the Interior states that under current technology, three materials—nickel, chromium, and cobalt—are the principal constituents of high-temperature alloys used in jet engines, turbines, and motors which operate at 1,650° F. With additions of titanium, boron, tungsten, molybdenum, or columbium, alloys may be produced which appear to have useful operating temperatures up to 1,800° F.

The Materials Advisory Board of the National Academy of Sciences

recently reported that an urgent need already exists for structural materials capable of operation at temperatures of 2,000° F. and higher for application in missiles, high-speed aircraft, and vehicles for the exploration of outer space. It is stated that even today there is a requirement for materials to serve as control surfaces for solid-fuel propellant rocket systems, leading edges in hypersonic aerial vehicles, sheet-metal components for turbojet afterburner assemblies, and various components of high-Mach-number ramjet engines. It is further reported that other systems yet to be designed or envisioned will make still greater demands for high-temperature structural materials. These operating conditions are said to be beyond the capabilities of the nickel- and cobalt-base alloys and attention has been focused on a family of high-melting metals referred to as refractory metals.

The Department of the Interior recently reviewed the status of technology of various metals and minerals that may develop an expanded use over the next 2 to 5 years, with particular reference to high-temperature specifications. It was concluded that there is a continuing demand for better performance materials at high temperatures, and that present technology continues to approach the best use of alloys based on conventional combinations.

In past years the military services were able to rely heavily upon materials developed for commercial purposes for use in new and improved weapons. Today there is a greater need for the development of new materials for use in missiles and space vehicles for which there are not similar commercial demands, and timing is of increasing importance. There are theoretical designs now in existence which are dependent upon new or improved materials in order to move forward to construction.

Most research in connection with the development of new materials is being carried out by military contractors, a large part of which is an adjunct to weapons contracts. In some cases a small percentage of contract funds may be expended for unspecified research. The Bureau of Mines, Geological Survey, the Bureau of Standards, the National Science Foundation, and the National Academy of Sciences have important responsibilities relating to materials research. Battelle Institute carries out important functions in contract research and in maintaining an information center. Throughout the Government there are various offices and agencies which have responsibilities for the development of materials and for entering into research contracts, and the Federal Council for Science and Technology and the Office of Civil and Defense Mobilization have the task of coordinating Government activities in these areas.

Due to the extent of our reliance upon new materials to strengthen our preparedness programs, and the wide division of responsibility within the Government for materials research, the maximum coordination of effort in materials research is essential. This coordination of effort should give due weight to the value of research for both the immediate future and the years ahead, avoid gaps in research programs and duplication of effort, and further the exchange of information.

The committee staff requested that the Executive Director of the Materials Advisory Board of the National Academy of Sciences indicate the need for new and improved materials in the future in terms

of specific examples. He states that a large number of vehicles are being considered for operation under reentry conditions. One of the earliest of these is called the Dyna-Soar system.

In the Dyna-Soar system, a winged vehicle is boosted to the upper level of the atmosphere and glides for distances up to several circumnavigations of the globe. On return to the earth's surface, its passage through the upper atmosphere is made at exceedingly high speeds with resultant very high temperatures. It is stated that the successful operation of this class of important scientific military vehicles requires that the vehicle withstand temperatures at leading edge locations of 3,500° F. and temperatures of structural members that may reach over 3,000° F. It is not feasible to construct or operate the systems unless high-temperature materials are available.

In this same category of vehicles are those that carry men from the earth to space stations and back. The reentry from space involves even higher speeds and even higher temperatures. It is stated that, ultimately, the successful operation of large-payload-carrying devices will depend on local areas being able to withstand temperatures of over 4,000° F. and structures withstanding temperatures over 3,000° F.

It is estimated that the development of reliable materials satisfying these temperature requirements will require several years of intensive research and development. The technical problems are rather clearly defined by a series of studies that have recently been completed, but the amount of effort in terms of dollars and man-years necessary to apply existing knowledge to the solution of the problems is said to substantially exceed normal research and development budgets for materials. It is said that the development of high-temperature materials is of importance not only to vehicles of this kind but that vehicles of this kind cannot operate effectively without high-temperature materials.

MAB reports that nuclear-propulsion systems are exceedingly attractive from the standpoint of a low fuel weight, but to be efficient they must operate at exceedingly high temperature so that the fluid which is heated can be utilized at the highest possible temperature. It is also stated that materials not only have to resist high temperatures but also must be compatable with the nuclear requirements. It is stated that the development of refractory materials that can satisfy both the nuclear and the high-temperature regime is essential to the development of efficient nuclear-powerplant systems, and that such systems would have utility for power generation in space as well as many important propulsion applications.

The following pertinent information from MAB relates to the importance of high-temperature materials in propellant systems:

> In chemical rocket propulsion systems, liquid propellants for rockets are generally circulated as coolants in the area of the high-temperature exhaust at the nozzle of the rocket motor. Accordingly, the very high temperatures in the flame can be tolerated by rather low temperature materials. However, solid rocket motors cannot be cooled by any known techniques that are reliable. Accordingly, the material of the rocket nozzle must be selected and developed so as to withstand very high temperature gases moving at high velocities. Improvement in the effectiveness of propellants is desirable

to increase the range and performance of the solid rocket motor itself. However, the improvements that may yield a 10-percent increase in impulse are always accompanied by an increase in flame temperature.

Flame temperatures are now being considered that approach the melting points of the most refractory of the metals. Unless these high-temperature metals are available and provided with suitable nonmetallic coatings or backup structure, the high-performance fuels are of little direct utility.

Refractory metals based on the element tungsten and, to some extent, on combinations of low-melting-point metals such as tantalum and molybdenum are again required to permit the use of highly energetic propellants and efficient nozzle design. Without these materials, a significant loss in performance up to 20 to 30 percent may be introduced. Again the development of the refractory metals for these purposes will be of great importance for other devices but these particular solid-propellant systems cannot operate as efficiently as desired without the availability of refractory materials.

On October 31, 1957, the Director of the Office of Defense Mobilization (now OCDM) appointed a Special Stockpile Advisory Committee to review stockpiling policies and programs. In issuing a report on January 28, 1958, the Special Stockpile Advisory Committee stated that it was impossible to identify the high-temperature or other special-property materials which might be in the greatest demand as new techniques are developed. The Advisory Committee recommended that a mechanism be established to appraise the possible effects of research and development activities on requirements for such materials and that stockpile objectives be projected for as much as 5 to 10 years hence where such need is indicated. After reviewing the report of the Advisory Committee, the Director of ODM (now OCDM) issued Defense Mobilization Order V–7, dated June 30, 1958, which reads in part as follows:

*Provision for special-property materials*

Prospective needs for high-temperature and other special-property materials shall be considered on the basis of a 3-year period beginning not more than 2 years in the future. Estimates of requirements therefor shall be included in the computation of objectives when there are indications of reasonably firm minimum requirements. In this connection arrangements shall be made for the regular availability of objective scientific advice to assist in such evaluation.

In implementing this policy the Director of ODM (now OCDM) wrote interested Federal agencies and the Special Assistant to the President for Science and Technology, the National Science Foundation, and the National Academy of Sciences, on June 30, 1958, and solicited their cooperation in supplying such information as may be helpful in establishing estimates of demand and supply for high-temperature and other special-property materials. He also requested reports at least twice a year on any developments which might have a bearing on the demand-supply situation for such materials.

During the past year OCDM has received reports from four sources: The Business and Defense Services Administration, the Office of the Director of Defense Research and Engineering of the Department of Defense, the Department of the Interior, and the Materials Advisory Board of the National Academy of Sciences. In a letter dated April 3, 1959, BDSA advised OCDM as to the adequacy of the supply of 28 materials, including metals and chemicals used for propellants.

The Director of OCDM received a report on military technology and materials availability from the Director of Defense Research and Engineering of the Department of Defense on January 1, 1959, and July 1, 1959. The purpose of these reports was to furnish authoritative and timely forewarning of new, militarily important uses of materials that appear to call for such quantities that the adequacy of supplies available to the United States may be questioned. The reports also represent a periodic canvass of prospective changes in the application or utility of materials brought about by advances in military and military-supporting science and technology. The July 1, 1959, report indicates that there is a fair prospect that, owing to developments in military technology, each of the following materials will be needed in significantly larger amounts during the period to mid-1964: Beryllium, molybdenum, bismuth, tellurium, helium, and titanium.

There are two other classes of materials which the Department of Defense plans to keep under surveillance. Although some research is being performed in connection with these materials, it is not anticipated that military demand will be affected within the 5-year period ahead. One of these classes consists of materials that are not now of any consequence in engineering applications but are receiving some research attention because of potentially attractive properties. The materials in this class are rhenium, hafnium, yttrium, cesium, rubidium, europium, gadolinium, and scandium. The second class is a group of materials now in considerable demand but which, as a possible result of research now in progress, may encounter substantially more military demand in the future. The materials considered in this class are platinum-group metals (rhodium), columbium, vanadium, tungsten, tantalum, selenium, zirconium, thorium, lithium, magnesium, silicon, cadmium, silver, quartz crystal, and gallium. In addition to tellurium, some of the other major materials reported to be receiving attention in the research and development effort centering around thermoelectric or solid-state-conversion effects are: aluminum, antimony, arsenic, gallium, germanium, indium, lead, nickel, selenium, silver and sulfur.

The report of the Department of the Interior reviews the status of the technology of various metals and minerals that may develop an expanded use over the next 2 to 5 years, with particular reference to high-temperature applications. It is stated in the report of the Department of the Interior that there is a continuing demand for better performance of materials at high temperatures, and that present technology continues to approach the best use of alloys based on conventional combinations. It is reported that many ceramic materials have been removed from consideration simply because improved properties, notably ductility and impact strength, could not be achieved fast enough to supply modern-day needs. The report of the Department of the Interior sets forth pertinent information on

the status of various metals and minerals. The information referred to follows:

From the viewpoint of current technology, three metals—nickel, chromium, and cobalt—are the principal constituents of high-temperature alloys used in today's jet engines, turbines, and motors, which operate at 1,650° F. Chromium imparts oxidation resistance to the nickel-base or cobalt-base alloys. With additions of titanium, boron, tungsten, molybdenum, or columbium, there are empirically compounded alloys which appear to have useful operating temperatures up to 1,800° F. This appears to be close to the limit that might be achieved under present techniques.

The hope of attaining alloys to work at much higher temperatures depends on the high-melting point materials, columbium, tantalum, molybdenum, and tungsten, all of which present problems in purification, workability at room temperature, and oxidation at high temperatures. Molybdenum is an example of the effort needed. In the last 15 years the workability problem has been solved in part, but there is still little protection against oxidation.

Early results of the present work on tungsten alloys are promising, but several years of investigation requiring many millions of dollars may be needed to develop a good tungsten-base alloy. On a strength-weight basis tungsten is the best of all metallic materials above 2,400° F. that can be obtained today; however, it does not completely satisfy our needs and is only a compromise until a better material can be developed. Nevertheless, a great interest in tungsten-base alloys can be expected for many years to come. A recent Bureau of Mines development on the vapor deposition of tungsten promises to have wide use for the protective coating for other materials used in the missile and rocket industry.

Columbium has received considerable attention in the past 4 years and several columbium-base alloys for high-temperature service have been developed which have excellent creep rupture strength at 1,800° F. Columbium is used as a fuel-alloying element in nuclear reactors, and experiments on other applications in nuclear power systems are being made. Columbium-base alloys also show promise for use in jet engines and as a structural material in high-speed aircraft. Although production of columbium metal more than doubled from 1957 to 1958, it is believed that demand will expand at a more moderate rate in the future.

Tantalum is similar to columbium but is more resistant to corrosion and has an even higher melting point. Although supply problems may preclude wide use of tantalum-base alloys, the metal appears to be a valuable additive element for high-temperature alloys based on metals such as columbium.

Rhenium has the second highest melting point of all the metals, and only in recent years have physical metallurgists demonstrated that the metal can be fabricated into useful forms. Although substantial commercial uses for the metal have not yet developed, rhenium has many important poten-

tial uses such as in filaments or cathode structures, electrical contacts, thermocouples, and in high-temperature strength alloy.

Beryllium is of interest as a moderator or reflector in nuclear reactors. It is intriguing also as a structural material for aircraft frames because of its low weight, good strength, and unusually high stiffness. Of late the space-travel planners have become interested in beryllium. The pay load of these crafts is so unbelievably low that serious consideration can be given to such an expensive metal as beryllium if it will increase the payload only 1 percent.

Titanium has a higher melting point than iron but its strength decreases rapidly above intermediate temperatures. Development of alloys which hold their strength at higher temperature levels is progressing. The exceptional corrosion resistance of titanium in aqueous solutions, particularly in oxidizing liquids such as hot nitric acid, has been extended to reducing acids by alloying.

Zirconium is used as a structural material and a fuel-cladding metal in nuclear reactors, and its use is increasing in spite of the fact that stainless steel is also being extensively used. Hafnium is used for control rods in nuclear reactors.

Thorium is finding a marked increase in application in magnesium-thorium alloys for use in missile and aircraft operating at intermediate temperature ranges (600° to 700° F.).

Recent development in thermoelectricity indicates that tellurium and selenium binary and ternary semiconductor compounds have the best performance characteristics for use in thermoelectric devices for the immediate future, especially in military and astronautic applications. The advantages of simplicity, silence, and portability are said to offset the higher initial cost. The two major fields of application for tellurium and selenium thermoelectric devices are (1) creating a heating or cooling effect depending on the direction of the passage of electricity (Peltier effect) or (2) generating electricity by the application of heat (Seebeck effect). Informal estimates of the quantity of tellurium required within the next few years are many times the present consumption levels. The impending demand for tellurium could become so serious that a supply requirements study should be made. Tellurium has the best performance characteristics in thermoelectric devices, but selenium is expected to be a major substitute should a shortage of tellurium develop.

The Department of Defense has drastically reduced its high-energy boron fuels program. Several contracts with private concerns have been canceled, and a number of plants producing boron fuel have been closed. One plant producing the $B^{10}$ isotope has been closed and placed in standby condition. Thus, although boron still has an important potential in the field of special-property materials, the rate of commercial development of anticipated major new uses has been interrupted. Emphasis has been returned to research activities.

Ceramics and cermets (combinations of ceramics and metals) form a group of potential high-temperature materials. Nonalloy compounds of the metals discussed, notably the oxides and carbides, have much higher melting points than the metal. They also have excellent oxidation resistance; for example, thorium oxide, carbide, and zirconate have melting points above 5,070° F. and very high boiling points, making them among the best of refractory materials. Yttrium oxide also has a high melting point (4,370° F.) and other yttrium compounds such as the sulfide, boride, and carbide, as well as the corresponding oxides and compounds of some of the "heavy" rare-earth metals, may have excellent refractory properties for many uses. Many improvements have been made in the last 10 years on increasing the purity and flexure strength of such materials, in bonding them to others, and in applications, but the fundamental problem of low shock resistance has not been solved.

The thermoelectric effects of bismuth intermetallic compounds promise development of nonmechanical refrigerators and air conditioners powered by low-energy heat sources. To a lesser extent the alloy may be used for silent power generation. If the possibilities are realized and more effective materials are not developed, demand for bismuth will expand greatly during the next 5 years. The understanding of solid-state phenomena is advancing so rapidly that it is quite possible other as-yet-unconsidered materials may soon be effective substitutes for bismuth thermoelectric devices.

Gallium arsenide is becoming of increasing importance to the electronic industry. Uses developed for it include solar cells for powering electronic equipment in space vehicles and high-temperature diodes for telephone systems and rectifiers. Other compounds, such as gallium antimonide and gallium phosphide, have also demonstrated interesting properties for use in electronic devices.

Indium is used principally in electronic devices, sleeve bearings, and low-melting alloys. Larger use of indium in electronic devices is anticipated and potential uses for indium compounds in electronics are rapidly developing. A silver-cadmium-indium alloy is a possible substitute for hafnium as a control-rod material in nuclear reactors.

In a report to OCDM dated April 2, 1959, the MAB made a review of earlier studies in high temperature and other special property materials with particular emphasis on technological developments.

In another report to the Director of Defense Research and Engineering, dated October 15, 1959, the Committee on Refractory Metals, MAB, made an appraisal of the problems associated with providing useful mill products to the missiles industry in both quantity and quality. This report covered the situation from ores to mill products, with special attention to technology, supply, and facilities. The assignment was handled by several panels, each comprising two groups: one dealing with raw materials and the other with applications. The raw materials group considered the availability and facilities for ores up to and including the production of mill concentrates, while

the applications group was concerned with the environmental and fabrication requirements and how they are met by the alloy systems, and the problems involved in production ranging from the reduction of concentrates to metal through to the manufacturing of mill products. The specific metals included in the study are molybdenum, columbium, tungsten, tantalum, chromium, vanadium, rhenium, and the platinum group.

The Committee on Refractory Metals, MAB, concluded that the metals of importance for structural use in air vehicles are molybdenum, columbium, tungsten, and tantalum. Of these, molybdenum and columbium will be used generally below 3,000° F., largely in applications between 1,800° and 2,600° F. It is believed that tungsten and tantalum will be employed most frequently in those situations where the operating temperatures exceed 2,600° F.

The report of the MAB committee states that in spite of the fact that strong alloys of molybdenum and columbium are available, there can be little use of these and other refractory metals until a number of serious problems have been resolved. These problems include protective coating, producibility, welding, and analytical chemistry. It is reported that producibility problems can be attacked directly with a high probability of early success if adequate funding is available and sound programs are organized. Welding is said to be a more difficult problem. Small laboratory welds, subjected to post weld mechanical and thermal treatments, have exhibited ductility. Larger welds made under production conditions generally do not. Protection against oxidation resistance is also reported to be a very difficult problem. Much work has been done on coatings and some on alloying. According to the report, no approach yet offers universal solution. For limited times under specific conditions, protection against oxidation is possible. The report states that work on coatings, per se, and on their application to larger assemblies is of critical importance, with probability of limited success quite high, but that universal success is not considered likely at this time.

In referring to basic research for refractory metals, the MAB committee states that a number of areas of fundamental research must be viewed as mandatory, as it is unlikely that major alloy improvements will be possible without support of these areas. This includes phase diagram studies, transition temperature for ductile to brittle fracture, oxidation and surface protection, methods of purification of the pure metal and purification of alloys during melting, thermal shock resistance, physical metallurgy, and fabrication and deformation characteristics. It is stated in the report that a small part of the work recommended is already underway in a number of the refractory metal areas, but that it is quite obvious that this effort is neither broad enough nor intense enough to provide the desired information necessary for alloy development and application. The MAB committee states that while it would be desirable to say that certain of these items should be supported first, it would not be wise to suggest that this be done. They further state that it is quite obvious that most of these studies must go on simultaneously, as previous experience has shown clearly that a solution to a problem or a gain in knowledge in any one area will not advance the overall effort unless the other fields also keep pace.

The Office of the Director of Defense Research and Engineering advises that the Department of Defense has carried out substantial research dealing with the properties of molybdenum over a period of more than 10 years, and has undertaken high-temperature research in certain other refractory metals more recently. It is reported that plans are now underway in the Department of Defense to accelerate high-temperature programs for refractory metals in line with the recommendations made in the report of the Materials Advisory Board of the National Academy of Sciences dated October 15, 1959.

In February 1959, the National Academy of Sciences appointed a special committee on scope and conduct of materials research. It is the purpose of this committee to review the total material research needs of the country, to ascertain the adequacy of present research programs to meet the needs, to appraise the manpower resources and facilities that are available, and to make recommendations for overcoming the deficiencies. Earlier the President's Science Advisory Committee had indicated to the National Academy of Sciences that there was urgent need for such a study of materials research. It is understood that the final report of the special committee, covering such matters as needed organizational changes, improvement of Government incentives, assurance of adequate supplies of raw materials, dissemination of research information, and strengthening of basic scientific research, was submitted in the fall of 1959 and is now under active consideration by the interested agencies.

*Melting points of all elements above iron (and selected ones below)*

| | Degrees Fahrenheit | | Degrees Fahrenheit |
|---|---|---|---|
| Carbon-graphite | 6692 | Vanadium | 3110 |
| Tungsten | 6143 | Thorium | 3074 |
| Rhenium | 5738 | Titanium | 3074 |
| Protactinium | 5432 | Actinium | 2912 |
| Tantalum | 5425 | Palladium | 2829 |
| Osmium | 4892 | Iron | 2802 |
| Molybdenum | 4752 | Cobalt | 2723 |
| Ruthenium | 4532 | Yttrium | 2687 |
| Iridium | 4449 | Nickel | 2651 |
| Columbium (niobium) | 4379 | Silicon | 2606 |
| Hafnium | 3866 | Beryllium | 2332 |
| Boron | 3632–4172 | Copper | 1981 |
| Rhodium | 3571 | Aluminum | 1220 |
| Chromium | 3434 | Zinc | 786 |
| Zirconium | 3353 | Lead | 621 |
| Ytterbium | 3272 | Tin | 448 |
| Platinum | 3223 | | |

*Melting point of certain refractory compounds*

| | Degrees Fahrenheit | | Degrees Fahrenheit |
|---|---|---|---|
| Hafnium carbide | 7029 | Titanium boride | 5252 |
| Tantalum carbide | 7011 | Tungsten carbide | 5193 |
| Zirconium carbide | 6404 | Vanadium carbide | 5126 |
| Columbium carbide | 6332 | Fused zirconia | 4892 |
| Fused thoria ($ThO_2$) | 5972 | Molybdenum carbide | 4874 |
| Titanium carbide | 5684 | Fused magnesia | 4752 |
| Zirconium boride | 5540 | Beryllia | 4622 |
| Boron nitride | 5432 | | |

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## DEFENSE PRODUCTION ACT EXPANSION PROGRAMS AND RELATED PROGRAMS

Congress has enacted several laws under which Government agencies are authorized to acquire strategic and critical materials. The primary purpose of this legislation has been to provide for the availability of adequate supplies to meet the military requirements and essential civilian needs in the event of an emergency. Some legislation has been enacted for the purpose of rendering economic assistance through domestic purchases for retention in Government inventories.

In addition to the Defense Production Act of 1950, as amended, purchases of materials have been authorized under the Strategic and Critical Materials Stockpiling Act of 1946 (Public Law 520, 79th Cong.); the Domestic Minerals Program Extension Act of 1953 (Public Law 206, 83d Cong.); the Agricultural Trade Development and Assistance Act of 1954 (Public Law 480, 83d Cong.); the Domestic Tungsten, Asbestos, Fluorspar, and Columbium-Tantalum Production and Purchase Act of 1956 (Public Law 733, 84th Cong.); the Federal Facilities Corporation Act of 1956 (Public Law 608, 84th Cong.); and the Agricultural Act of 1956 (Public Law 540, 84th Cong.).

## TOTAL GOVERNMENT INVENTORIES

During the 12 months ending June 30, 1959, strategic materials having a cost value of $431,979,593 were added to Government inventories. These deliveries increased the total inventory value of all materials acquired under congressional authorizations to $8,296,582,900. Of this total, the amount of $752,273,600 consists of materials which are of nonstockpile grade. Some of these materials which are of nonstockpile grade have little or no market value at the present time. Although GSA has not considered it practical to place a market value on these materials, a rough estimate of the market value of the nonstockpile grade materials is understood to be about one-fourth of the book value. It has been suggested that figures be compiled on the market value of these materials.

Of the total inventory, materials having a cost value of $7,554,309,300 were of stockpile grade as of June 30, 1959, and the market value was estimated to be $7,158,858,500. As of June 30, 1958, the inventory loss, or difference between acquisition cost and market value, was more than twice the $385,450,800 differential indicated as of June 30, 1959. This indicates an improvement in the market value of minerals during the past year.

GSA estimates that additional materials having a cost value of $718 million will be delivered to Government inventories under firm con-

tracts and "put" options through fiscal year 1965, as follows: Defense Production Act inventory, $510.8 million; national stockpile, $46 million; and CCC inventory for transfer to the supplemental inventory, $161.2 million. Of the $510.8 million in anticipated deliveries to the DPA inventory, over 95 percent is expected to consist of the materials which follow: Aluminum, cobalt, copper, metallurgical manganese, mica, nickel, and titanium. The table which follows sets forth the various Government inventories of materials of stockpile grade and of nonstockpile grade, including the acquisition cost and market value of existing inventories and the dollar value of materials on order.

*Summary of Government inventories, June 30, 1959*

| | Inventory | | On order, acquisition cost |
|---|---|---|---|
| | Acquisition cost | Market value [1] | |
| National stockpile (Public Law 520): | | | |
| Stockpile grade | $5,916,844,000 | $5,784,864,400 | [2] $45,987,000 |
| Nonstockpile materials | 299,383,300 | | |
| Total | 6,216,227,300 | | |
| Defense Production Act inventory (Public Law 744): | | | |
| Stockpile grade | [3] 943,017,100 | 704,477,100 | [4] 510,751,000 |
| Nonstockpile materials | 425,169,900 | | |
| Total | 1,368,187,000 | | |
| Supplemental stockpile (Public Law 480): | | | |
| Stockpile grade | 581,227,700 | [5] 573,761,200 | |
| Nonstockpile materials | 22,911,500 | | |
| Total | 604,139,200 | | |
| Commodity Credit Corporation inventory (Public Law 480): | | | |
| Stockpile grade | 93,701,400 | 86,659,600 | 161,251,000 |
| Nonstockpile materials | 4,808,900 | | |
| Total | 98,510,300 | | |
| Federal Facilities Corporation (Public Law 608): Stockpile grade—tin | 9,519,100 | 9,096,200 | |
| Subtotals: | | | |
| Stockpile grade | 7,544,309,300 | 7,158,858,500 | 717,989,000 |
| Nonstockpile grade | 752,273,600 | | |
| Grand total | 8,296,582,900 | 7,158,858,500 | 717,989,000 |

[1] Market value of nonstockpile materials not available.
[2] Includes materials valued at $10.8 million to be transferred from International Cooperation Administration account at no cost to the stockpile; also $4.5 million cost of upgrading certain materials now in inventory.
[3] Does not include work in process (Nicaro nickel and mica) totaling $524,577.
[4] Value of materials at market prices which it is reasonable to assume Government will be required to accept under Defense Production Act expansion program contracts.
[5] Includes transfer of $27.5 million ($26.7 million material costs and $0.8 million accessorial costs) from Department of the Interior inventory acquired under Public Law 733.

NOTE.—Nonstockpile materials include materials in Government inventories not having stockpile objectives or not meeting stockpile specifications.

## DEFENSE PRODUCTION ACT INVENTORY

During the fiscal year ending June 30, 1959, minerals and metals having a cost value of $246.6 million were delivered to the DPA inventory. Of this total, approximately $152.2 million were acquired under "put" options in DPA expansion contracts. Aluminum, copper, manganese, and nickel made up nearly 90 percent of the total deliveries. From the inception of the expansion programs through June 30, 1959, minerals and metals delivered to the DPA inventory amounted to $2,407,457,978 of which materials having a cost of $1,035,843,049 were sold to the national stockpile and to private contractors, primarily for defense purposes. Receipts from the sale of these materials amounted to $968,720,982. The materials in the DPA inventory as of June 30, 1959, had a cost value of $1,371,614,929 (including $3,427,929 of materials in transit and being processed) and a market value of $843,012,000.

During the fiscal year 1959 there were no transfers of strategic materials from the DPA inventory to the national stockpile, as funds were not appropriated for this purpose. Sales to industry consisted primarily of about $20 million worth of nickel, and limited quantities of Mexican manganese, mica scrap, and nonspecification grade titanium sold as surplus. Mercury, having a value of about $4.4 million, was transferred to another agency.

The table which follows sets forth pertinent information relating to the Defense Production Act inventory, including purchases and sales, current inventories at cost and market, profits and losses, and operating expenses.

*Summary of Defense Production Act inventory—Total purchases, inventory, and operating costs, December 1950 through June 30, 1959*

| Commodity | Total purchases | June 30, 1959 inventory at cost | Sales from inventory | | | Operating expense | Net operating profit or loss | June 30, 1959, market value of inventory |
|---|---|---|---|---|---|---|---|---|
| | | | Received from sales | Government cost | Gain or (loss) | | | |
| Aluminum (pig) | $551,106,393.72 | $345,230,415.48 | $206,004,884.14 | $205,875,978.24 | $128,905.90 | $18,581.61 | $110,324.29 | $336,157,000 |
| Aluminum subsidy (power) | | | | | | 19,108,396.88 | (19,108,396.88) | |
| Aluminum (sheet) | 4,783,156.24 | 0 | 5,036,339.50 | 4,783,156.24 | 253,183.26 | 75,171.76 | 178,011.50 | |
| Asbestos | 2,102,575.05 | 2,102,575.05 | 0 | 0 | 0 | 43,789.52 | (43,789.52) | 1,428,000 |
| Bauxite | 25,304,369.86 | 18,167,964.20 | 7,085,435.32 | 7,136,405.66 | (50,970.34) | 77,416.94 | (128,387.28) | 15,509,000 |
| Beryllium | 1,428,973.20 | 888,331.55 | 426,831.36 | 540,641.65 | (113,810.29) | 184,728.04 | (298,538.33) | 544,000 |
| Bismuth | 52,361.89 | 52,361.89 | 0 | 0 | 0 | 0 | 0 | 52,000 |
| Chrome | 29,549,651.64 | 26,846,027.56 | 2,468,088.92 | 2,703,624.08 | (235,535.16) | 572,093.02 | (807,628.18) | 11,207,000 |
| Cobalt | 44,040,104.01 | 39,489,959.65 | 3,964,168.16 | 4,550,144.36 | (585,976.20) | 1,599.77 | (587,575.97) | 33,149,000 |
| Columbium-tantalum | 77,572,039.28 | 59,951,504.81 | 10,609,771.84 | 17,620,534.47 | (7,010,762.63) | 998,375.43 | (8,009,138.06) | 12,369,000 |
| Columbium-tantalum subsidy | | | | | | 6,276,886.38 | (6,276,886.38) | |
| Copper | 127,988,220.24 | 75,409,294.33 | 56,243,426.82 | 52,578,925.91 | 3,664,500.91 | 435,049.89 | 3,229,451.02 | 85,734,000 |
| Copper subsidy | | | | | | 1,816,758.49 | (1,816,758.49) | |
| Cryolite | 15,338,836.06 | 10,760,466.70 | 3,619,369.36 | 4,578,369.36 | (959,000.00) | 198,193.12 | (1,157,193.12) | 6,702,000 |
| Flourspar | 14,962,095.64 | 1,394,452.72 | 10,278,689.32 | 13,567,642.92 | (3,288,953.60) | 44,678.24 | (3,333,631.84) | 985,000 |
| Graphite | 177,545.00 | 177,545.00 | 0 | 0 | 0 | 50,625.03 | (50,625.03) | 0 |
| Lubricating graphite development | | | | | | 173,858.06 | (173,858.06) | |
| Lead | 14,884,274.73 | 2,785,740.73 | 11,810,183.90 | 12,098,534.00 | (288,350.10) | 253,393.20 | (541,743.30) | 1,767,000 |
| Magnesium | 122,754,518.01 | 0 | 110,860,261.85 | 122,754,518.01 | (11,894,256.16) | 3,721,870.72 | (15,616,126.88) | |
| Manganese | 194,467,870.24 | 158,172,369.59 | 27,807,944.70 | 36,295,500.65 | (8,487,555.95) | 5,273,536.06 | (13,761,092.01) | 55,701,000 |
| Mercury | 6,801,013.55 | 0 | 6,824,411.79 | 6,801,013.55 | 23,398.24 | 11,103.91 | 12,294.33 | |
| Mica | 37,066,703.43 | 25,544,225.58 | 3,752,302.54 | 11,522,477.85 | (7,770,175.31) | 916,916.65 | (8,687,091.96) | 13,294,000 |
| Molybdenum | 39,889,847.74 | 0 | 38,457,047.90 | 39,889,847.74 | (1,432,799.84) | 74,530.73 | (1,507,330.57) | |
| Nickel—Nicaro | 124,045,682.50 | 22,263,241.51 | 117,835,582.13 | 101,782,440.99 | 16,053,141.14 | 1,872.67 | 16,051,268.47 | 29,598,000 |
| Nickel—other | 233,371,984.97 | 92,325,856.71 | 110,606,805.82 | 141,046,128.26 | (30,439,322.44) | 2,718,933.67 | (33,158,256.11) | 65,814,000 |
| Rutile | | | | | | 9,918.16 | (9,918.16) | |
| Scrap (nonferrous) | 532,904.48 | 0 | 426,312.89 | 532,904.48 | (106,591.59) | 0 | (106,591.59) | |
| Selenium | | | | | | 228,442.64 | (228,442.64) | |
| Tin | 176,592,585.97 | 1,037,651.35 | 174,082,935.19 | 175,555,234.62 | (1,472,299.43) | 16,788.03 | (1,489,087.46) | 1,074,000 |
| Titantium | 168,009,779.90 | 163,554,050.54 | 4,310,324.74 | 4,455,729.36 | (145,404.62) | 1,974,264.06 | (2,119,668.68) | 72,165,000 |
| Tungsten | 366,916,159.54 | 325,460,894.39 | 34,540,972.02 | 41,455,265.15 | (6,914,293.13) | 2,049,407.29 | (8,963,700.42) | 99,763,000 |
| Zinc | 27,718,031.63 | 0 | 21,668,892.72 | 27,718,031.63 | (6,049,138.91) | 93,434.56 | (6,142,573.47) | |
| Total | 2,407,457,978.52 | 1,371,614,929.34 | 968,720,982.93 | 1,035,843,049.18 | (67,122,066.25) | 47,420,614.53 | (114,542,680.78) | 843,012,000 |
| Minerals and metals expenses not included above: | | | | | | | | |
| Research and development | | | | | | | (7,553.80) | |
| Losses on accounts receivable and advances | | | | | | | (5,450,372.04) | |
| Depreciation | | | | | | | (5,218,396.81) | |
| Loss on disposal of assets | | | | | | | (7,341,306.73) | |
| Other | | | | | | | (752,663.10) | |
| Total | | | | | | | (18,770,292.48) | |
| Income from interest, rentals, etc | | | | | | | 24,416,553.76 | |
| Total not included above | | | | | | | 5,646,261.28 | |
| Net operating loss | | | | | | | (108,896,419.50) | |

### STATUS OF DEFENSE PRODUCTION ACT BORROWING AUTHORITY

The President is authorized, under section 302 of the Defense Production Act, to provide for loans and the guarantee of loans to private business for the expansion of capacity, the development of technological processes, or the production of essential materials, including the exploration, development, and mining of strategic and critical metals and minerals. Section 303 of the act makes provision for purchases of or commitments to purchase metals, minerals, and other materials, for Government use or resale, and for the encouragement of exploration, development, and mining of strategic minerals and metals. This section also provides for the processing and refining of materials, and for transportation and storage. When in his judgment it will aid the national defense, the President is authorized to install additional equipment, facilities, processes, or improvements to plants, factories, and other industrial facilities owned by private persons.

Section 304(b) of the Defense Production Act authorizes, subject to the approval of the President, borrowings from the Treasury of the United States to carry out the purposes of sections 302 and 303 of the act. Section 304(b) reads in part as follows:

> Any agency created under this section, and any department, agency, official, or corporation utilized pursuant to this section is authorized, subject to the approval of the President, to borrow from the Treasury of the United States, such sums of money as may be necessary to carry out its functions under sections 302 and 303: *Provided*, That the amount borrowed under the provisions of this section by all such borrowers shall not exceed an aggregate of $2,100 million outstanding at any one time: *Provided further*, That when any contract, agreement, loan, or other transaction heretofore or hereafter entered into pursuant to section 302 or 303 imposes contingent liability upon the United States, such liability shall be considered for the purposes of sections 3679 and 3732 of the Revised Statutes, as amended, as an obligation only to the extent of the probable ultimate net cost to the United States under such transaction; and the President shall submit a report to the Congress not less often than once each quarter setting forth the gross amount of each such transaction entered into by any agency of the U.S. Government under this authority and the basis for determining the probable ultimate net cost to the United States thereunder.

As of June 30, 1959, OCDM had allocated $2,099,684,000 of the $2.1 billion borrowing authority to delegate agencies to carry out Defense Production Act programs. Only $316,000 had not been allocated as of June 30, 1959.

| | |
|---|---|
| **Allocated for activities authorized under sec. 302:** | |
| Department of Treasury | $165,00,000 |
| Export-Import Bank | 25,500,000 |
| | 190,500,000 |
| Allocated for activities authorized under sec. 303 procurement programs: | |
| General Services Administration | 1,804,000,000 |
| Department of Treasury | 1,600,000 |
| Department of Agriculture | 67,784,000 |
| Minerals exploration program: Department of the Interior | 35,800,000 |
| Total | 1,909,184,000 |
| Total funds allocated | 2,099,684,000 |
| Reserve unallocated by OCDM | 316,000 |
| Total borrowing authority | 2,100,000,000 |

The $2.1 billion borrowing authority was increased through the appropriation of the sum of $108 million in the 86th Congress (Public Law 86-213).

From the inception of Defense Production Act program in 1950 through June 30, 1959, the total certifications amounted to $8,267,509,000 and the total gross transactions contracted amounted to $8,022,420,000. The estimated probable ultimate net cost as of June 30, 1959, was estimated to be $1,219,885,000. Although there was a reduction of $87.4 million in the total program certified as compared with June 30, 1958, there was an increase of $35.4 million in the estimated probable ultimate net cost. This is due largely to interest charges.

Of the DPA activities mentioned above, the gross transactions contracted by the General Services Administration as of June 30, 1959, amounted to $7,489,870,000. The transactions of GSA include facility expansions and supply contracts for strategic and critical materials, and contracts for special services (including research). The probable ultimate net cost of the Defense Production Act programs of GSA was estimated at $1,111,934,000 as of June 30, 1959. Since these estimated costs include not only the actual losses realized to date on the resale of materials, operating expenses, Treasury interest, research expenses, etc., but also a forecast of the losses and expenses to be incurred in the future, it will be many years before the total cost to the Government has been fully realized. For example, of the total probable ultimate net cost of $1,111,934,000 estimated through 1965, only $271.1 million was actually realized as of June 30, 1959.

Of the $7,489,870,000 in gross transactions contracted by GSA, nearly $6.4 billion were completed, cancelled or terminated as of June 30, 1959. Of this amount deliveries to the Government (represented by material acquisitions, facility expansions and special services) made up $3.7 billion. The remaining $2.7 billion represented obligations which the Government was not required to accept due largely to direct

sales of contractors to purchasers other than the Government, some "put" options of contractors not being exercised, and cancellation or reductions in some contracts. According to GSA, contract reductions accomplished from July 1, 1957, to August 31, 1959, were estimated to be $336,100,000, and $287,923,000 of this amount related to Defense Production Act contracts. OCDM policy established in 1958 provided that any commitments for deliveries to the stockpile or DPA inventories beyond the maximum objectives be cancelled when settlements could be arranged that would be mutually satisfactory to the supplier and the Government, and would not be disruptive to the economy.

The probable ultimate net cost of $1,111,934,000 for DPA programs estimated by GSA consists of the following: Losses realized to date, $271.1 million; losses anticipated on DPA inventories on hand, $576.8 million; and losses estimated on future deliveries and other transactions, $264 million. From the inception of the program to June 30, 1959, the interest charges on DPA funds borrowed from the Treasury amounted to $135.7 million and it is estimated that an additional amount of $120.8 million will be due the Treasury through June 30, 1965. The administrative cost totaled $20.2 million as of June 30, 1959, and it is estimated that this cost will increase $10.5 million through the fiscal year 1965.

### ESTIMATED FUTURE CASH REQUIREMENTS

Prior to mid-1957 it was thought that the $2.1 billion authorized would be sufficient to cover the cost of Defense Production Act programs through the fiscal year 1965. The Defense Production Act inventory has been the source of supply for a high percentage of the materials purchased for the stockpile. Substantial purchases for future delivery were made through the use of Defense Production Act funds to meet the requirements of stockpile objectives based on an emergency of 5 years duration. When planning to meet a possible future emergency was reduced from 5 years to 3 years, the stockpile

objectives were reviewed and reduced substantially. Deliveries of materials to the Defense Production Act inventory under contracts entered into in previous years are continuing and most of these materials are not required to meet defense needs as measured in terms of stockpile objectives. Funds have not been appropriated for the transfer of materials from the Defense Production Act inventory to the national stockpile during the past 3 years. In addition, the decline in the 1957–58 level of business activity resulted in less industrial demand and reduced market prices for metals and minerals, and contractors exercised their options to "put" increased quantities of excess production. The increased deliveries and retention of materials in the DPA inventory have required a relatively large amount of capital.

As of September 30, 1959, the maximum exposure of the Government under outstanding DPA contracts was approximately $808.9 million. Due to improved business conditions, it is expected that contractors will not exercise all "put" options. The General Services Administration estimates that the sum of $474.4 million more nearly represents the cash requirement needed to make payment for DPA materials through 1965. Approximately $5 million of this total covers materials delivered and awaiting payment and the remainder covers estimated future deliveries.

The table which follows sets forth the cash requirements which GSA estimates will be needed to meet Defense Production Act obligations through the fiscal year 1965. The table indicates that additional funds will be required to cover expenditures for the fiscal year 1961. The surplus as of the end of the fiscal year 1960 is estimated to be $63,068,000. This figure is based on a total fund availability of $2,208 million less funds required of $2,144,932,000 through the fiscal year 1960. The total fund availability of $2,208 million consists of a borrowing authority limitation of $2,100 million and appropriations of $108 million in Public Law 86–213, 86th Congress. The table indicates that under this fund availability there will be an estimated deficit of $55,295,000 as of the end of fiscal year 1961 and the deficit would increase each succeeding year through fiscal year 1965, at which time the deficit would be $458,109,000.

## *Long-range forecast of probable cash requirements*

(Assumptions: (1) Probable deliveries from contracts in effect as of Sept. 30, 1959; (2) sales from Nicaro and other known items only; (3) payment of interest at note maturity for procurement activities under sec. 303 and currently for lending activities under sec. 302)

[Thousands of dollars]

| | Fiscal year 1960 | Fiscal year 1961 | Fiscal year 1962 | Fiscal year 1963 | Fiscal year 1964 | Fiscal year 1965 | Total, fiscal years 1960–65 |
|---|---|---|---|---|---|---|---|
| A. General Services Administration: | | | | | | | |
| 1. Cumulative net expenditures, beginning of year | $1,676,418 | $1,879,077 | $2,023,916 | $2,135,902 | $2,236,162 | $2,370,786 | $1,676,418 |
| 2. Activity during period: | | | | | | | |
| (a) Expenditures: | | | | | | | |
| (1) Purchase of materials | 203,452 | 149,709 | 92,933 | 48,327 | 28,665 | 12,445 | 535,531 |
| (2) Treasury interest | 25,039 | 781 | 12,145 | 45,960 | 99,654 | 114,022 | 297,601 |
| (3) Other expenditures | 8,881 | 7,622 | 7,683 | 6,463 | 6,435 | 6,314 | 43,398 |
| (4) Total expenditures | 237,372 | 158,112 | 112,761 | 100,750 | 134,754 | 132,781 | 876,530 |
| (b) Receipts: | | | | | | | |
| (1) Sales to stockpile | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (2) Sales to others | 28,442 | 10,790 | 0 | 0 | 0 | 0 | 0 |
| (3) Other receipts | 6,271 | 2,483 | 775 | 490 | 130 | 130 | 10,279 |
| (4) Total receipts | 34,713 | 13,273 | 775 | 490 | 130 | 130 | 49,511 |
| (c) Net expenditures during period | 202,659 | 144,839 | 111,986 | 100,260 | 134,624 | 132,651 | 827,019 |
| 3. Cumulative net expenditures, end of period | 1,879,077 | 2,023,916 | 2,135,902 | 2,236,162 | 2,370,786 | 2,503,437 | 2,503,437 |
| B. Other agencies: | | | | | | | |
| 1. Cumulative net expenditures, beginning of period: | | | | | | | |
| (a) Interior Department | 30,774 | 31,557 | 31,357 | 31,097 | 32,117 | 31,717 | 30,774 |
| (b) Agriculture Department | 58,807 | 64,728 | 64,735 | 64,735 | 66,212 | 66,495 | 58,807 |
| (c) Treasury Department | 148,894 | 136,200 | 119,900 | 105,500 | 90,100 | 74,600 | 148,894 |
| (d) Export-Import Bank | 24,767 | 18,370 | 13,387 | 9,908 | 2,565 | −4,953 | 24,767 |
| (e) Total | 263,242 | 250,855 | 229,379 | 211,240 | 190,994 | 167,859 | 263,242 |
| 2. Net expenditures or receipts (−) during period: | | | | | | | |
| (a) Interior Department | 783 | −200 | −260 | 1,020 | −400 | −150 | 793 |
| (b) Agriculture Department | 5,921 | 7 | 0 | 1,477 | 283 | 12,115 | 19,803 |
| (c) Treasury Department | −12,694 | −16,300 | −14,400 | −15,400 | −15,500 | −15,100 | −89,394 |
| (d) Export-Import Bank | −6,397 | −4,983 | −3,479 | −7,343 | −7,518 | −2,052 | −31,772 |
| (e) Total | −12,387 | −21,476 | −18,139 | −20,246 | −23,135 | −5,187 | −100,570 |
| 3. Cumulative net expenditures, end of period | 250,855 | 229,379 | 211,240 | 190,994 | 167,859 | 162,672 | 162,672 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C. Grand total, all agencies: | | | | | | | |
| 1. Cumulative net expenditures, beginning of year | 1,939,660 | 2,129,932 | 2,253,295 | 2,347,142 | 2,427,156 | 2,538,645 | 1,939,660 |
| 2. Net expenditures during year | 190,272 | 123,363 | 93,847 | 80,014 | 111,489 | 127,464 | 726,449 |
| 3. Cumulative net expenditures, end of year | 2,129,932 | 2,253,295 | 2,347,142 | 2,427,156 | 2,538,645 | 2,666,109 | 2,666,109 |
| 4. Add working cash requirements | 15,000 | 10,000 | 8,000 | 5,000 | 3,000 | 0 | 0 |
| 5. Total funds required | 2,144,932 | 2,263,295 | 2,355,142 | 2,432,156 | 2,541,645 | 2,666,109 | 2,666,109 |
| 6. Deduct fund availability: | | | | | | | |
| (a) Borrowing authority limitation | 2,100,000 | 2,100,000 | 2,100,000 | 2,100,000 | 2,100,000 | 2,100,000 | 2,100,000 |
| (b) Appropriation (Public Law 86-213) | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 |
| Total fund availability | 2,208,000 | 2,208,000 | 2,208,000 | 2,208,000 | 2,208,000 | 2,208,000 | 2,208,000 |
| 7. Surplus (+) or deficit (−) | 63,068 | −55,295 | −147,142 | −224,156 | −333,645 | −458,109 | −458,109 |

## NATIONAL STOCKPILE

The Strategic and Critical Materials Stock Piling Act (Public Law 520, 79th Cong.) provides for the accumulation of strategic and critical materials for use in the event of a national emergency.

In issuing Defense Mobilization Order V–7 on June 30, 1958, the Director of OCDM stated that all strategic stockpile objectives should be limited to meeting estimated shortages of materials for a 3-year emergency period and should be adequate for limited war or general war, whichever shows the larger supply-requirement deficit to be met by stockpiling.

Stockpiling planning is carried out for two types of objectives: (1) Basic objectives, and (2) maximum objectives. The basic stockpile objective represents the deficit after allowing for U.S. production and imports from world sources, the latter being discounted in varying degrees according to estimated strategic risks involved. The maximum objective is computed in the same way, except that imports only from nearby areas, such as Canada, Mexico, and Cuba, are included. The basic objectives are to be achieved as expeditiously as possible, whereas procurement for maximum objectives takes a lower priority.

As of June 30, 1959, there were 73 materials for which basic and maximum objectives had been established. The current objectives, based on the 3-year concept, are substantially lower than the objectives which were previously established under planning for a 5-year emergency. There are large quantities of materials which were acquired under the earlier objectives which are not now required to meet maximum objectives. However, current objectives do not cover postattack recovery. The Director of OCDM, in testifying before this committee on August 18, 1959, stated as follows:

> One of the important current activities is to determine the role of stockpile materials in relation to general war with nuclear attack, including the problem of postattack recovery.

OCDM is currently reviewing interim-stockpile objectives. The analysis is expected to be completed early in 1960. To date only limited guidance is available from the military services and the national damage-assessment center for estimating the requirements and availability of supply in the event of an attack on this country and the estimated quantity of materials that will be needed to meet rehabilitation requirements following a nuclear attack. The current round of reviews, therefore, will cover mainly conditions of war without attack on this country. Indications are that some months will be required to determine both military requirements and rehabilitation needs, taking into account all the pertinent factors to be considered in case of an attack.

Of the $8,296,582,900 of materials in all Government inventories, materials are carried in the national stockpile having a cost value of $6,216,227,300. Of this total, the amount of $5,916,844,000 is for materials which meet stockpile specifications for which there are stockpile objectives; however, the $5,916,844,000 figure includes $2,086,813,900 in materials which are in excess of maximum stockpile objectives. Of the remainder of the national stockpile, the amount of $95,746,500 does not meet stockpile specifications, and the amount of $203,636,800 con-

sists of materials which do not have stockpile objectives. It is reported that some of the materials met stockpile specifications when acquired but no longer qualify due to technological advances. Others were purchased early in the stockpile program with the view of upgrading to usable form under emergency conditions. Some additional materials were transferred from other agencies to the stockpile.

The following table sets forth the materials carried in the national stockpile and the various Government inventories, including acquisition cost, market value, and the quantities in excess of maximum stockpile objectives:

*Summary of Government inventories, June 30, 1959*

(Maximum stockpile objective: Market value, $4,147,346,000)

| | Total inventory | | Excess to maximum stockpile objective | |
|---|---|---|---|---|
| | Acquisition cost | Market value | Acquisition cost | Market value |
| A. Inventories having stockpile objectives: | | | | |
| (1) Meeting stockpile specifications: | | | | |
| National stockpile | $5, 916, 844, 000 | $5, 784, 864, 400 | $2, 096, 813, 900 | $1, 909, 388, 600 |
| Supplemental stockpile | 581, 227, 700 | 573, 761, 200 | 468, 514, 400 | 462, 338, 300 |
| Defense Production Act | 943, 017, 100 | 704, 477, 100 | 893, 167, 300 | 664, 410, 500 |
| CCC barter | 93, 701, 400 | 86, 659, 600 | 55, 461, 600 | 54, 293, 200 |
| RFC (FFC Texas smelter) | 9, 519, 100 | 9, 096, 200 | 9, 519, 100 | 9, 096, 200 |
| Total | 7, 544, 309, 300 | 7, 158, 858, 500 | 3, 513, 476, 300 | 3, 098, 526, 800 |
| (2) Not meeting stockpile specifications: [1] | | | | |
| National stockpile | 95, 746, 500 | ---------- | 95, 746, 500 | ---------- |
| Supplemental stockpile | 4, 805, 900 | ---------- | 4, 805, 900 | ---------- |
| Defense Production Act | 250, 117, 700 | ---------- | 250, 117, 700 | ---------- |
| CCC barter | 702, 400 | ---------- | 702, 400 | ---------- |
| RFC (FFC Texas smelter) | 0 | ---------- | 0 | ---------- |
| Total | 351, 372, 500 | ---------- | 351, 372, 500 | ---------- |
| B. Inventories not having stockpile objectives: [1] | | | | |
| National stockpile | 203, 636, 800 | ---------- | 203, 636, 800 | ---------- |
| Supplemental stockpile | 18, 105, 600 | ---------- | 18, 105, 600 | ---------- |
| Defense Production Act | 175, 052, 200 | ---------- | 175, 052, 200 | ---------- |
| CCC Barter | 4, 106, 500 | ---------- | 4, 106, 500 | ---------- |
| RFC (FFC Texas smelter) | 0 | ---------- | 0 | ---------- |
| Total | 400, 901, 100 | ---------- | 400, 901, 100 | ---------- |
| C. Summary: | | | | |
| National stockpile | 6, 216, 227, 300 | ---------- | 2, 386, 197, 200 | ---------- |
| Supplemental stockpile | 604, 139, 200 | ---------- | 491, 425, 900 | ---------- |
| Defense Production Act | 1, 368, 187, 000 | ---------- | 1, 318, 337, 200 | ---------- |
| CCC barter | 98, 510, 300 | ---------- | 60, 270, 500 | ---------- |
| RFC (FFC Texas smelter) | 9, 519, 100 | ---------- | 9, 519, 100 | ---------- |
| Total | 8, 296, 582, 900 | ---------- | 4, 265, 749, 900 | ---------- |

[1] Market value has not been calculated due to the mixed nature of individual commodities such as different types, quality, and grades as well as lack of active trading which would create current market values.

Source: General Services Administration.

As of June 30, 1959, materials held in the national stockpile approximately equaled or exceeded the basic objective for 63 of the 73 materials listed as stockpile items and approximately equaled or exceeded the maximum objectives for 50 of these materials. The inclusion of other Government inventories would have increased the basic

objectives approximately equaled or exceeded to 67 and the maximum objectives to 55. The table which follows sets forth information on the dollar figures for basic objectives and maximum objectives and the extent to which materials on hand and on order meet the objectives (not including the quantities of material which are in excess of maximum stockpile objectives, materials in the stockpile for which there are no stockpile objectives, and materials which do not meet stockpile specifications).

| | Interim objectives (market prices) | | | |
|---|---|---|---|---|
| | Basic | | Maximum | |
| | Value | Percent of objective | Value | Percent of objective |
| Value of objective | $2,518,701,000 | 100.0 | $4,147,346,000 | 100.0 |
| Value of inventory [1] | 2,469,169,000 | 98.0 | 3,876,475,000 | 93.5 |
| Value on order | 6,956,700 | .3 | [2] 12,515,000 | .3 |
| Total | 2,476,125,700 | 98.3 | 3,888,990,000 | 93.8 |
| Total commodities | 73 | | 73 | |
| Total objectives completed | 63 | | 50 | |

[1] Figures do not include $1.9 billion at market of materials held in stockpile which are stockpile grade in excess of maximum objectives. Not included also are materials held in stockpile not having stockpile objectives or those not meeting stockpile specifications.

[2] Figures include $4.5 million to be transferred from ICA to fill objectives. Figures do not include another $6.4 million to be transferred from ICA and $22.4 million under contract for stockpile delivery which are in excess of the maximum objectives.

Effective July 1, 1959, two materials, corundum, and sapphire and ruby, were restored to the stockpile list, increasing the total to 75 materials. Prior to June 1956 these materials were removed from the stockpile list and placed in the group II list of materials without objectives. Present stockpile inventories of these two materials are adequate to meet the maximum objectives established.

During the fiscal year ending June 30, 1959, stockpile procurement was limited to 4 materials: Amosite asbestos, small diamond dies, jewel bearings, and muscovite block and film mica. After objectives were revised, all importers having stockpile contracts for foreign mica were notified that no extension of delivery periods would be granted. Contracts for the upgrading of Government-owned materials in the stockpile to higher use forms included oxygen-free copper, tungsten carbide powder, ferrovanadium, ferromolybdenum, and molybdic oxide. These will be returned to the stockpile when processing is completed.

On October 29, 1959, OCDM advised that during fiscal year 1960 new stockpile procurement will be limited to chrysolite asbestos, diamond dies, and jewel bearings. Amosite asbestos has been transferred from the stockpile-procurement list to acquisition through barter for delivery to the supplemental inventory even though stockpile objectives have not been met. New contracts for upgrading limited quantities of Government-owned tungsten carbide powder, molybdic oxide, and tantalum metal are also planned for the current year.

DOMESTIC MINERALS PROGRAM EXTENSION ACT OF 1953 (PUBLIC LAW 206, 83D CONG.)

During the year ending June 30, 1959, domestic producers of beryl, metallurgical-grade manganese, and mica have continued to make deliveries to the DPA inventory under the provisions of the Domestic Minerals Program Extension Act of 1953 (Public Law 206). The inventories of these materials on hand and on order exceed the maximum stockpile objectives, and for most of the materials the quantities are far in excess of the maximum objectives.

The Domestic Minerals Program Extension Act of 1953 was enacted to encourage the discovery, development, and production of asbestos, beryl, chromite, columbium-tantalum bearing ores, manganese, mica, and tungsten in the United States and its territories and possessions. The objective of the act was to eliminate the dependency of the United States on oversea sources of supply for these materials through domestic programs with incentive payments generally higher than prevailing market prices. With the exception of chromite, Public Law 206 made provision for financing these programs through the use of DPA borrowing authority funds. Chromite has been acquired with stockpile funds.

Prior to the passage of Public Law 206 these materials were acquired under regulations issued under authority of the Defense Production Act shortly after the beginning of the Korean war. These materials were in short supply at that time. Each program had fixed termination dates and quantity limitations which would terminate purchases if reached prior to the expiration date. The termination dates ranged from June 30, 1955, to December 31, 1956. Public Law 206 extended the termination dates of these programs for a period of 2 years without changing quantity limitations.

By 1955 it appeared that limitation quotas for some of the materials would be reached in advance of the termination dates. The 84th Congress passed H.R. 6373 authorizing purchases to continue to the termination dates without regard to quantity limitations. This act was vetoed by the President on August 14, 1955.

In 1956, when some of the purchase programs had terminated or were about to terminate under the quantity limitation, new legislation was considered by the Congress. On June 26, 1956, the Director of ODM testified that our defense position did not justify the continuation of the programs for asbestos, columbium-tantalum, and tungsten, since the quantities on hand and on order exceeded the long-term stockpile objectives. He recommended that the Congress provide interim assistance to these mining industries pending recommendations of the Department of the Interior on a long-range non-defense-minerals program. As to beryl, chromite, metallurgical-grade manganese, and mica, the Director of ODM stated that action was being taken to insure the continuance of these domestic purchase programs, since the long-term (maximum) objectives for these four materials had not been completed.

As of September 1, 1959, beryl and mica were the only minerals for which quantity limitations under Public Law 206 had not been reached. The termination date for each of these programs is June 30, 1962, or until the quantity limitation for each is reached. The Government inventories of beryl on hand and on order are almost twice the amount of the maximum stockpile objective.

The following table indicates that from the inception of the domestic purchase program through June 30, 1959, the Government has acquired materials at a cost of $388,392,229. The estimated gross program cost is increased to $420,281,036 when other expenditures are included, such as initial transportation charges to storage sites and the cost of operating depots. GSA has estimated the total probable ultimate net cost of the program to the Government at $282.2 million, of which $23.7 million was actually realized as of June 30, 1959. The difference of $258.5 million in estimated future losses includes projected inventory losses based on the current market value of the materials.

*Government purchases and estimated net losses under domestic minerals purchase program (Public Law 206) through June 30, 1959*

| | Termination date | Unit | Quota limitation | Actual purchases [1] | | | | Estimated [2] gross program cost | Probable ultimate net cost | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Fiscal year 1959 | | Accumulative | | | Realized [3] to June 30, 1959 | Estimate [4] for future | Total |
| | | | | Quantity | Cost | Quantity | Cost | | | | |
| Asbestos: | | | | | | | | | | | |
| Crude No. 1 and 2 | Oct. 1, 1957 | Short tons | 1,500 | | | 1,499 | $1,762,505 | $2,145,000 | $42,000 | $674,000 | $716,000 |
| Crude No. 3 | | | | | | 850 | 340,070 | | | | |
| Beryl | June 30, 1962 | do | 4,500 | 370 | $203,488 | 2,318 | 1,289,260 | 2,574,000 | 146,000 | 711,000 | 857,000 |
| Chromite | June 30, 1959 | Long tons | 200,000 | | | 199,961 | 18,588,036 | [5] 18,588,036 | | | |
| Columbium-tantalum | Dec. 31, 1958 | Pounds | 15,000,000 | | | 15,567,912 | 60,637,262 | 67,373,000 | 11,237,000 | 30,447,000 | 41,684,000 |
| Manganese: | | | | | | | | | | | |
| Butte-Philipsburg, Mont. | June 30, 1958 | Long-ton units. | 6,000,000 | | | 6,020,471 | 9,074,869 | 11,227,000 | 2,114,000 | 7,563,000 | 9,677,000 |
| Deming, N. Mex. | do | do | 6,000,000 | | | 6,215,258 | 12,036,388 | 12,371,000 | 238,000 | 10,797,000 | 11,035,000 |
| Wenden, Ariz. | do | do | 6,000,000 | | | 6,108,316 | 10,743,179 | 11,211,000 | 186,000 | 9,360,000 | 9,546,000 |
| Domestic small producers | Jan. 1, 1961 | do | 28,000,000 | 6,730,752 | 17,682,486 | 26,037,372 | 66,729,245 | 72,085,000 | 1,598,000 | 49,019,000 | 50,617,000 |
| Mica | June 30, 1962 | Short tons | 25,000 | 3,411 | 3,309,195 | 17,834 | 17,978,629 | 32,968,000 | 7,631,000 | 20,365,000 | 27,996,000 |
| Tungsten | July 1, 1958 | Short-ton units. | 3,000,000 | | | 2,996,280 | 189,212,786 | 189,739,000 | 509,000 | 129,559,000 | 130,068,000 |
| Total | | | | | 21,195,169 | | 358,392,229 | 420,281,036 | 23,701,000 | 258,495,000 | 282,196,000 |

[1] Includes purchase cost of materials only.
[2] Includes (1) purchase cost of materials delivered, (2) estimated purchase cost of materials remaining to be delivered under the program, (3) initial transportation charges to storage site, and (4) operating cost of depots established under program.
[3] Includes actual loss from resales, operating costs of depots, and transportation charges.
[4] Represents primarily estimated inventory losses based on current market value.
[5] Purchase made with stockpile funds (Public Law 520) for delivery to stockpile.

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### DOMESTIC TUNGSTEN, ASBESTOS, FLUORSPAR, COLOMBIUM-TANTALUM PRODUCTION AND PURCHASE ACT OF 1956 (PUBLIC LAW 733, 84TH CONG.)

It became apparent that quantity limitations established under the domestic purchase program (Public Law 206) for asbestos, columbium-tantalum, and tungsten would be reached prior to the June 30, 1956, termination date. The Department of the Interior recommended that the Congress consider an interim purchase plan to aid the domestic producers of these minerals pending the enactment of a long-range, nondefense, minerals program.

In July 1956, the Congress enacted the Domestic Tungsten, Asbestos, Fluorspar, and Columbium-Tantalum Production and Purchase Act of 1956 (Public Law 733), which directed that a purchase program for these minerals be established by the Department of the Interior until December 31, 1958, or until quota limitations were reached, whichever occurred first. Except for asbestos, the act provided for premium prices substantially above market prices. The Department of the Interior estimated that the cost of carrying out these programs over the 2½-year period would be $91.7 million.

In 1958 the Secretary of the Interior submitted recommendations for a long-range minerals program to the Congress. Proposals were considered in the Senate for guaranteed price supports for a 5-year period for fixed quantities of lead, zinc, fluorspar, and tungsten sold annually to commercial processors. A proposal was also considered for the purchase of 150,000 tons of copper through June 30, 1959, at the prevailing market price (not to exceed 27½ cents per pound) for delivery to the supplemental stockpile. Although the proposed legislation passed the Senate, incentive payments for other materials with annual quantity limitations were added in the House (domestic beryl, chromite, and columbium-tantalum). The proposed legislation was not passed by the House.

On July 29, 1958, the Congress authorized an extension of the termination date of the domestic purchase program established under Public Law 733 for asbestos and fluorspar from December 31, 1958, to December 31, 1959. This action was vetoed on August 12, 1958.

House Concurrent Resolution 177 passed both Houses in the 86th Congress. This resolution expresses it to be the sense of the Congress that it is in the national interest to foster and encourage the maintenance and development of a sound and stable domestic mining and minerals industry without critical dependence on foreign sources. The resolution requests that the President have reviews made at once of the existing programs of the departments and agencies with the purpose of using them more effectively to provide for increased production on an economically sound basis, and to submit at the earliest possible date any reorganization or recommendations for legislation that may be necessary to accomplish this objective.

From the inception of the program to the termination (July 1956–December 31, 1958) total appropriations amounted to $30.9 million and total expenditures amounted to approximately $28.1 million. As provided in Public Law 733, all materials purchased under this program were held in the inventory of the Department of the Interior for transfer to the national stockpile or the supplemental stockpile as determined by the Director of OCDM. On November 20, 1958, the Director of OCDM authorized the transfer of the total inventory to the supplemental stockpile, and the transfer has been completed.

### BARTER PROGRAM FOR STRATEGIC MATERIALS (PUBLIC LAW 480, 83D CONG.)

The value of materials delivered to the Commodity Credit Corporation by contractors under barter agreements during the fiscal year 1959 totaled only $145.1 million as compared with $187.7 million in the fiscal year 1958 and $250.2 million in the fiscal year 1957. Of the total $145.1 million delivered in the fiscal year 1959, $44.9 million was acquired under earlier procurement directives for the long-term stockpile, $95.8 million by CCC for the supplemental stockpile, and $4.4 million for the Department of Defense (later transferred to the supplemental stockpile).

Since the inception of the barter program the accumulative deliveries have amounted to $884.7 million. The following table indicates the value of bartered materials procured by CCC for the national stockpile and the supplemental stockpile as of June 30, 1959:

*Strategic materials delivered by barter*

[In millions]

| Materials acquired for— | Fiscal years | | | | | |
|---|---|---|---|---|---|---|
| | 1950–55 | 1956 | 1957 | 1958 | 1959 | Total |
| Minimum stockpile | $88.0 | $64.6 | $51.5 | $18.7 | | $222.8 |
| Long-range stockpile | 43.2 | 32.6 | 37.9 | 84.4 | $44.9 | [1] 243.0 |
| Supplemental stockpile | 2.1 | 71.2 | 160.8 | 79.9 | 95.8 | 409.8 |
| Other agencies | | | | 4.7 | 4.4 | [2] 9.1 |
| Total | 133.3 | 168.4 | 250.2 | 187.7 | 145.1 | 884.7 |

[1] Materials acquired for long-term stockpile objectives but transferred or being transferred to supplemental stockpile.
[2] Materials acquired for other agencies but transferred to supplemental stockpile.

The table which follows sets forth the materials which were designated by the President as eligible for barter on November 11, 1958, and those which were no longer eligible in May and September 1959 due to the barter quota being realized:

*Materials designated as eligible for barter*

| | Materials designated by the President, Nov. 11, 1958 | Acceptable for barter offers | | |
|---|---|---|---|---|
| | | November 1958 | May 1959 | September 1959 |
| Abrasives, crude | X | X | X | |
| Aluminum oxide | X | X | X | |
| Antimony | X | X | X | X |
| Asbestos, amosite | X | X | | |
| Asbestos, crocidolite | X | X | | |
| Bauxite: | | | | |
| Surinam | X | X | X | |
| Jamaican | X | X | X | X |
| Refractory | X | X | X | X |
| Beryl (hand-cobbed) | X | X | X | X |
| Bismuth | X | X | X | X |
| Cadmium | X | X | | |
| Chromite: | | | | |
| Metallurgical | X | X | | |
| Refractory | X | X | X | X |
| Chemical | X | X | X | |
| Columbite | X | X | X | X |
| Cryolite | X | X | X | |
| Diamonds and bort | X | X | | |
| Ferrochrome | X | X | | |
| Fluorspar: | | | | |
| Acid | X | X | | |
| Metallurgical | X | X | X | X |
| Lead | X | X | | |
| Manganese: | | | | |
| Battery grade (commercial) | X | X | | |
| Battery grade A | X | X | | |
| Chemical grade A | X | X | | |
| Chemical grade B | X | X | | |
| Metallurgical grade [1] | X | X | X | |
| Mercury | X | X | X | |
| Mica: | | | | |
| Muscovite block | X | X | X | X |
| Muscovite film | X | X | X | X |
| Muscovite splittings | X | X | X | X |
| Nickel | X | X | X | X |
| Palladium | X | X | X | |
| Quartz crystals | X | X | | |
| Ruthenium | X | X | | |
| Selenium | X | X | | |
| Silicon carbide | X | X | X | X |
| Tantalite | X | X | X | X |
| Tin | X | X | X | X |
| Zinc | X | X | X | X |
| Total | 39 | 39 | 24 | 16 |

[1] Added to list May 4, 1959.

On September 16, 1959, the Department of Agriculture announced further changes in the barter program, stating that these were considered necessary to safeguard usual marketings of the United States and to avoid undue disruption of world prices of agricultural commodities or replacement of cash sales for dollars. The changes were incorporated into a new table of commodity-country designations which reclassifies barter outlets for the surplus agricultural commodities. The table includes a list of 105 destination areas as compared to 83 on the list as of November 1958. Although officials within the Department of Agriculture have indicated that the changes could result in a reduction of the level of barter exports in the current fiscal year, it has been indicated that they expect the changes to help focus future barter efforts toward countries less able to pay cash and those which have not been major markets historically for agricultural commodities.

SUPPLEMENTAL STOCKPILE

As of June 30, 1959, the supplemental stockpile consisted of 30 materials valued at $604.1 million at acquistion cost, of which $491.4 million was in excess of the maximum stockpile objectives. Bauxite, chromite, fluorspar, lead, manganese, and zinc make up about 84.5 percent of the materials at cost meeting stockpile specifications which are in excess of the maximum stockpile objectives. The excess inventory is made up of both stockpile and nonstockpile grade materials as follows: materials having stockpile objectives and meeting stockpile specifications valued at $468.5 million at cost and $462.3 million at market prices; materials not meeting stockpile specifications valued at $4.8 million at cost; and materials not having stockpile objectives valued at a cost of $18.1 million. The estimated market value of the materials in the last two categories is not available at this time.

The materials presently held in the supplemental stockpile have been acquired from two general sources: the exchange of surplus agricultural commodities for strategic materials through CCC barter transactions totaling $576.6 million at cost and the Domestic Tungsten, Asbestos, Fluorspar and Columbium-Tantalum Production and Purchase Act of 1956 (Public Law 733) totaling $27.5 million at cost.

Authority for placing materials in the supplemental stockpile is contained in (1) the Agricultural Trade Development and Assistance Act of 1954 (sec. 104(b), Public Law 480) which created the supplemental stockpile and provided that materials acquired for the supplemental stockpile may be additional to the amount acquired for the national stockpile; (2) the Agricultural Act of 1956 (sec. 206, Public Law 540) which authorized the transfer of materials acquired under the act by the Commodity Credit Corporation as a result of barter (unless acquired for the national stockpile) to the supplemental stockpile; and (3) the Domestic Tungsten, Asbestos, Fluorspar, and Columbian-Tantalum Production and Purchase Act of 1956 (sec. 3, Public Law 733), which provided that materials acquired under the act should be held by the Department of the Interior to be made available to the strategic stockpile or to be turned over to the supplemental stockpile. On November 20, 1958, the Director of OCDM authorized the transfer of the total inventory ($27.5 million) acquired under Public Law 733 to the supplemental stockpile.

It should be noted that once materials are acquired for the supplemental stockpile, they cannot be released for use without congressional approval. This provision is set forth in section 104(b) of the Agricultural Trade Development and Assistance Act of 1954 which states that materials shall be released from the supplemental stockpile only under the provisions of section 3 of the Strategic and Critical Materials Stock Piling Act (Public Law 520). Section 3 of the Stock Piling Act provides that no material constituting a part of the stockpile may be disposed of without the express approval of Congress except by reason of obsolescence of that material for use in time of war.

Under section 5 of the Strategic and Critical Materials Stock Piling Act the President is authorized to release stockpile materials for use, sale, or other disposition when in his judgment such release is required for purposes of the common defense either in time of war

or during a national emergency. However, the Agricultural Trade Development and Assistance Act makes no reference to section 5 but specifically states that materials shall be released only in accordance with section 3 of the Strategic and Critical Materials Stock Piling Act. In view of the foregoing the Director of the Office of Defense Mobilization, as early as July 1956, pointed out that materials once added to the supplemental stockpile cannot be released unless approved by the Congress.

### SURPLUS DISPOSAL POLICY

During the past year there has been little or no change in the established policy of OCDM for dealing with the disposal of surplus materials that have been acquired under the Defense Production Act and other procurement programs. During this period the number of sales consummated has been limited. As of June 30, 1959, strategic materials held in Government inventories equaled or exceeded maximum stockpile objectives for 55 materials in the amount of $4.3 billion at cost, of which $1.3 billion represented acquisitions under the Defense Production Act expansion programs.

The Office of Civil and Defense Mobilization has the responsibility for approving plans for the disposal of surplus materials after consultation with other interested agencies. At the request of OCDM, it is the function of GSA to work out the proposed plans for sale in accordance with the provisions contained in the Strategic and Critical Materials Stock Piling Act (Public Law 520), the Defense Production Act, and the disposal policies set forth in Defense Mobilization Orders V–3 and V–7. Section 3 of the Stock Piling Act authorizes procedures designed to protect producers, processors and consumers against avoidable disruption of their usual markets by surplus sales from the stockpile. It provides that details, as to the quantities to be sold and the proposed rate of disposition, must be published in the Federal Register 6 months before being put into effect, with a copy to both Houses of Congress for their express approval before any sales can be consummated. Sales of obsolete stockpile materials do not require congressional approval. Such sales can be consummated unless the Congress specifically disapproves within the 6-month waiting period.

The Defense Production Act provides that minerals and metals in the DPA inventory shall not be sold at less than the current domestic market price. These sales do not require congressional approval. However, the Director of ODM (now OCDM) established a policy relating to surplus materials acquired under the Defense Production Act in Defense Mobilization Order V–3 dated March 18, 1954, which is under review. Among other provisions DMO V–3 provides that surplus disposal will not be made, either in whole or in part, without clear indication that such action will not have a serious adverse effect on the market prices or create major market fears or uncertainties. It also provides that where the quantity is substantial in relation to the annual market consumption, a public announcement well in advance of disposal will be made as to the quantity to be sold, the markets in which the material will be offered, and the minimum market price that will prevail.

As of October 16, 1959, OCDM had authorized GSA to prepare sales plans for the disposal of 55 materials, of which 44 are stockpile materials and 11 are DPA materials. GSA has prepared disposal plans for 20 of the stockpile items and 5 of the DPA materials for further consideration and approval. Only 4 of the plans developed to date require congressional approval. The four submitted for congressional approval since August 1957 include cotton in 1957, diamond gems and platinum group metals in 1958, and zircon concentrates in 1959. Congress approved the disposal of diamond gems, platinum metal group, and zircon on September 9, 1959. A joint resolution was introduced to waive the 6-month waiting period for coconut oil disposal but was passed over in the House on August 29, 1959.

In April 1959 consideration was given by OCDM to the gradual sale of approximately 136,000 short tons of surplus copper from the DPA inventory in quantities of 5,000 tons per month. Copper producers voiced strong opposition to this program and on April 17, 1959, the Senate passed Resolution 101 stating "that the best interests of the country, from both the national security and economic standpoints, will not be served by the release of any part of any governmental inventory of copper at this time." On May 13, 1959, your chairman asked the Director of OCDM to keep the joint committee informed of proposed sales of any material in the DPA inventory. In his reply of May 29, the Director of OCDM advised that he would be pleased to arrange for the committee to be notified of any such proposed sales in the future.

For some time officials in OCDM, GSA, and other interested Government agencies have been reviewing present policies and possible modifications in statutory authorizations pertaining to the retention and disposal of surpluses from the various Government inventories. The Director of OCDM has indicated that the objective is to develop a stockpile program acceptable to the Congress which would permit the orderly disposal of surplus material no longer required for defense purposes, with due regard to Government protection against avoidable losses, and to the protection of producers, processors, and consumers against disruption of usual markets. At the present time materials valued at $351.4 million not meeting stockpile specifications and another $400.9 million not having stockpile objectives are being held in four of the five Government inventories (national stockpile, supplemental stockpile, DPA inventory, and CCC inventory).

### MINERALS EXPLORATION

The minerals exploration program, established in April 1951 under section 303(a) of the Defense Production Act of 1950, and administered by the Defense Minerals Exploration Administration, was terminated June 30, 1958. In announcing the program termination on June 6, 1958, DMEA advised that exploration contracts in effect on June 30, 1958, would be continued until completed or terminated in accordance with contract provisions and that all pending applications would be held for review under the criteria established in any new legislation to encourage minerals exploration that might be enacted by the Congress later.

In the seventh annual report, submitted to Congress in January 1958, the committee pointed out that few minerals remained for which there was a need for locating new domestic resources in the interest of national defense and that time had arrived for a reappraisal of the DMEA program as authorized and financed under the Defense Production Act to achieve defense objectives. The report recommended that defense needs should be defined in order to accurately distinguish between defense and nondefense needs in administering the exploration program. In his letter of February 14, 1958, the Acting Secretary of the Interior advised the committee that following discussions with the Office of Defense Mobilization (now OCDM), it was agreed that the Department of the Interior should seek new legislative authority to continue a DMEA type program on a permanent basis, using appropriated funds rather than continuing the use of DPA funds. The Secretary pointed out that such legislation was intended to encourage long-range exploration to discover major new ore bodies for 10, 20, or even 30 years hence. He stated that in the opinion of the Department of the Interior, a continuing program of exploration is essential to the long-term security of the United States, but the impossibility of projecting the direct military requirements over a span of years made it exceedingly difficult to justify the inclusion of a substantial group of minerals in an exploration program designed solely to meet the demonstrable needs of national defense.

On August 21, 1958, the Congress enacted a new minerals exploration program, Public Law 85–701. This program is similar to the DMEA program in that it provides Federal assistance in financing exploration for minerals but with appropriated funds rather than allocation of borrowing authority funds under the Defense Production Act. The law authorizes and directs the Secretary of the Interior, in order to provide for discovery of additional domestic minerals reserves, to establish and maintain a program for exploration by private industry within the United States, its territories and possessions for such materials, excluding organic fuels, as he shall designate from time to time.

On September 11, 1958, the Secretary of the Interior established the Office of Minerals Exploration to carry out the statutory responsibilities of the Secretary under Public Law 85–701 and provided that authorities delegated to the Administrator of the DMEA be transferred to the Director, Office of Minerals Exploration. This transfer of DMEA delegations was issued on September 22, 1958. The present list of minerals designated as eligible for financial assistance includes 32 of the minerals which were listed as eligible for financial aid under the previous DMEA program. Tungsten is the only mineral omitted under the OME program.

In view of the reduction in the Government's estimated cost as compared with the estimates of a year ago, OCDM arranged with OME for the withdrawal of $3 million from the $38.8 million certified borrowing authority, allocated to DMEA, effective June 30, 1959.

In his letter of July 15, 1959, to the Director of OCDM, the Acting Secretary of the Interior advised that while the figures indicate that OME should be able to meet all the obligations expected to fall due in fiscal year 1960 and still permit the $3 million withdrawal requested by OCDM, insufficient DPA funds would be available to cover the Treasury interest which will accrue in fiscal year 1961.

As of July 30, 1959, the Office of Minerals Exploration had estimated the total cash expenditures required to meet contract obligations and interest charges at approximately $8.5 million during the next 6 years through fiscal year 1965. During this period it is estimated that the Government should receive royalty payments amounting to $2.5 million, leaving a net cash requirement of $6 million. Starting with the fiscal year 1960 all administrative costs incurred in closing out the DMEA program are to be absorbed in OME's appropriated funds. On the basis of the estimated annual expenditures and royalty receipts shown in the following table, it appears that the present $35.8 million borrowing authority fund should be adequate to cover the cash requirements through the fiscal year 1964. The figures indicate that a deficit of nearly $1 million is likely to occur during fiscal year 1965. The estimated annual interest charges payable to the Treasury over the 6-year period make up $7.7 million of the total $8.5 million in anticipated cash expenditures.

*Cash requirements forecast—Borrowing authority fund for fiscal years 1960 through 1965*

| | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 |
|---|---|---|---|---|---|---|
| Cumulative net cash expenditures beginning of year | $30,773,784 | $31,723,784 | $32,673,784 | $33,663,784 | $34,653,784 | $35,678,784 |
| Expenditures: | | | | | | |
| Loans, grants, advances, and working capital | 450,000 | 200,000 | 140,000 | 40,000 | | |
| Treasury interest | 1,000,000 | 1,150,000 | 1,250,000 | 1,350,000 | 1,425,000 | 1,500,000 |
| Total | 1,450,000 | 1,350,000 | 1,390,000 | 1,390,000 | 1,425,000 | 1,500,000 |
| Royalty receipts | 500,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 |
| Net cash expenditures | 950,000 | 950,000 | 990,000 | 990,000 | 1,025,000 | 1,100,000 |
| Cumulative net cash expenditures—end of fiscal year | 31,723,784 | 32,673,784 | 33,663,784 | 34,653,784 | 35,678,784 | 36,778,784 |
| DPA borrowing authority certified | 35,800,000 | 35,800,000 | 35,800,000 | 35,800,000 | 35,800,000 | 35,800,000 |
| Balance DPA fund available | 4,076,216 | 3,126,216 | 2,136,216 | 1,146,216 | 121,216 | −978,784 |

A large number of small operators have participated in the DMEA program. Approximately 60 percent of all the DMEA contracts called for an expenditure of $25,000 or less, and about 43 percent provided for the operator to spend less than $3,000 of his own funds or furnish an equivalent amount in the value of his own labor, supervision, or equipment to complete the contract. Based upon financial standing, annual production, number of employees, and importance in the industry, in excess of 80 percent of the participants, according to OME, could be classed as small business.

The Department of the Interior furnished the committee with a detailed report covering the liquidation of the DMEA program. The details appear in the appendix of the report of this committee.

## COPPER

Government exposure under copper contracts was reduced approximately 160,000 tons during the fiscal year 1959 with the bulk of the reduction—98,935 tons having an estimated value of $54,026,000—representing tender rights not exercised by contractors. Deliveries to the

Defense Production Act inventory and the national stockpile and contract reductions accomplished by the General Services Administration accounted for the balance. The number of outstanding contracts was reduced from six to three during the year.

Maximum exposure at the beginning of the current fiscal year was 107,991 tons of copper which, if delivered, would cost the Government an estimated $61,569,000. However, actual future deliveries were estimated by GSA at only 31,493 tons to cost $18,852,000. Exposures and estimated deliveries under the three contracts outstanding July 1, 1959, follow:

| Contractor | Maximum remaining exposure | | Total estimated future deliveries | |
|---|---|---|---|---|
| | Quantity (short tons) | Amount (thousands) | Quantity (short tons) | Amount (thousands) |
| San Manuel Copper Co | 89,498 | $49,976 | 13,000 | $7,259 |
| National Lead Co | 2,475 | 1,782 | 2,475 | 1,782 |
| Rhodesian Congo Border Power Co | 16,018 | 9,811 | 16,018 | 9,811 |

Deliveries during the year ending June 30, 1959, totaled 39,555 tons and cost $21,699,000. Deliveries under the three contracts terminated during the year totaled 11,273 tons for which the Government paid $6,330,000. Deliveries under the contracts still in force amounted to 28,282 tons costing $15,369,000.

Three contract reductions totaling 20,827 tons with an estimated value of $11,879,000 were reported by GSA for the fiscal year 1959. During the previous year, contracts were reduced by 59,660 tons or $33,796,000, bringing the 2-year total to 80,487 tons or $45,675,000.

Producers having Government contracts which were terminated during fiscal year 1959 were:

*International Nickel Co. of Canada.*—This contractor delivered 2,500 tons of copper to the DPA inventory during the year for a total of 47,504 tons which cost the Government $27,633,000. The original gross contract was reduced by cancellation of 2,496 tons or $1,540,000 on December 16, 1958.

*White Pine Copper Co.*—This contractor delivered 7,122 tons during the year to bring total deliveries to the DPA inventory to 30,045 tons costing $16,320,000. Tender rights not exercised total 200,169 tons estimated to cost $108,727,000. The contract termination agreement negotiated with GSA on November 28, 1958, resulted in a reduction of 13,536 tons valued at $7,699,000.

*Sherritt-Gordon Mines, Ltd.*—This producer completed its contract to supply the national stockpile with 12,504 tons by delivering 1,651 tons during the year. Total cost of the contract to the Government was $8,321,000.

Outstanding Government contracts are with the following producers who are expected to complete copper deliveries before or during the fiscal year 1963:

*National Lead Co.*—This contractor delivered 623 tons at a cost of $449,000 during the fiscal year 1959 for a total of 1,125 tons costing $786,000. The balance of deliveries to the DPA inventory (see exposure table above) is scheduled through fiscal year 1963.

*San Manuel Copper Co.*—Deliveries under this producer's DPA contract amounted to 25,755 tons at a cost of $13,971,000 in the fiscal year 1959, bringing cumulative deliveries to 79,117 tons costing $42,921,000. Tender rights not used rose to 178,885 tons valued at $97,216,000 by June 30, 1959. Although the company had remaining tender rights of 89,498 tons at that time, GSA estimated that only 13,000 additional tons valued at $7,259,000 would be put to the Government and the contract completed in the fiscal year 1961.

*Rhodesian Congo Border Power Co.*—Deliveries by this contractor were 1,904 tons in fiscal year 1959, bringing the cumulative figure to 13,017 tons at a cost of $7,466,000. Exposure under a 33,830-ton contract was further reduced by 4,795 tons or $2,640,000 during the year as a result of the company electing to make Export-Import Bank loan payments in cash in lieu of copper shipments to the DPA inventory. Maximum remaining exposure at the beginning of the current fiscal year was 16,018 tons estimated to cost the Government $9,811,000. (GSA reported another cancellation of 3,065 tons on August 31, 1959, with the contractor making an equivalent payment of $1,735,000 to the Export-Import Bank. Thus, the Defense Production Act borrowing authority was relieved of a total expenditure of $4,375,000 in payment for 7,860 tons of copper that otherwise would have been delivered to GSA.)

The domestic copper industry was well along the road to balance between production and consumption in 1959 when work stoppages beginning early in August halted 75 percent of the Nation's primary and refined copper output and cut deliveries sharply.

Deliveries of refined copper in the first 10 months of 1959 averaged 113,954 tons a month compared with the 1958 average of 98,285 tons despite marked slumps to 90,123 tons in August, 92,501 tons in September, and 68,640 tons in October as the result of strikes. June deliveries were 150,993 tons, a new record. The January–October total of 1,139,539 tons compared with 1,179,460 tons delivered during the entire year of 1958.

Production at refineries dropped to 83,677 tons in August—off 50,343 tons from the July prestrike level—and then plunged to 44,648 tons in September and 44,218 tons in October. Production for the first 10 months of 1959 totaled 1,138,011 tons for an average of 113,801 tons. This compares with a monthly average of 120,545 tons in 1958 when output for the entire year was 1,446,540 tons.

Domestic producer stocks dropped to 78,308 tons by November 1, 1959, as copper consumers continued to draw on refinery inventories. Three months earlier, before the strikes began, stocks had hit a 1959 high of 103,432 tons. A year earlier, refineries held 128,490 tons.

Strikes cut production of primary copper at U.S. mines to 51,327 tons in August and then to 19,503 tons in September, a drop of more than 62,000 tons from the July level and the lowest in 25 years. October production, however, increased slightly to 21,060 tons. Average output for the first 10 months of 1959 was 76,097 tons as compared with the 1958 monthly average of 84,014 tons.

Foreign copper statistics showed the effects of the strikes which shut down many of the most important mines and refineries in the United States. There was a sharp August upturn of 25,424 tons over July in deliveries of refined metal by foreign producers. The August

total of 147,121 tons was the highest reported since October 1958. Deliveries of 139,781 tons in September and 142,297 tons in October brought the total for the first 10 months of 1959 to 1,366,987 tons, which compares with 1,738,988 tons for all of 1958.

Foreign production of refined copper, which reached a 1959 high of 147,993 tons in May, was reported at 142,276 tons in August, 142,646 tons in September, and 137,489 tons in October. Average output for the first 10 months of the year was 139,854 tons as compared with the 1958 monthly average of 136,457 tons.

Foreign primary output of 181,617 tons in August topped all previous months in 1959. Production was 167,334 tons in September and 162,474 tons in October. These figures compare wih the 1958 monthly average of 142,103 tons and the 1959, 10-month average of 169,483 tons.

Stocks of refined copper held abroad dropped to 242,130 tons by November 1 after hitting a record high of 286,122 tons on August 1. These amounts compare with 144,834 tons in inventory on November 1, 1958, and the previous record of 277,316 tons on January 1, 1958.

The United States imported less copper for consumption in July than the 6-year peak recorded in June, according to Bureau of Census figures, but net imports continued at a relatively high level. For the first 7 months of 1959, net imports exceeded by 60,608 tons the entire 1958 total. Net imports (gross imports less exports) for July were 32,535 tons compared with 46,545 tons in June, believed the highest level since 1953.

Gross imports of primary copper for consumption and for refining and reexport totaled 43,933 tons in July, about 15,000 tons below the June level. However, exports continued their 1959 decline to 11,398 tons in July. Net imports of primary copper for the January–July period of 1959 totaled 153,523 tons. This compares with 92,905 tons for the entire year of 1958 when net imports were at an 18-year low.

The second of three 1959 surges in copper prices occurred soon after the late summer strikes hit major segments of the industry. The price of custom smelter copper was increased from 30 to 33 cents on August 31 by the only processor to have signed a new labor pact at that time and was quoted at a nominal 33 cents as the strike entered its fourth month. On September 9, the price of refined copper was increased from 30 to 31½ cents by producers whose operations were not affected by strikes. The market range, however, was 30 to 31½ cents from September 9 to October 5, and 30 cents nominal to 33 cents from October 6 to November 12 when the domestic primary producer market was established at a flat 33 cents.

The higher prices compare with a custom smelter price of 34 cents in effect from March 16 to April 10 and a refinery price of 31½ cents in effect from March 9 to July 15.

The September 1959 prices of 33 cents for custom and 30–31½ cents for refined copper compared with 26¼ and 26½ cents, respectively, a year earlier. Prices firmed up in the late months of 1958 with the general improvement in the domestic copper situation. Refined copper rose to the year's high of 29 cents and remained there beyond the end of 1958 after holding at 25 cents from January to June. The custom price rose to 30 cents in October 1958 from 23 cents in early February and closed the year at 29 cents.

The 1.7 cents a pound excise tax on copper imports into the United States, which was reimposed July 1, 1958, after a 7-year suspension, remained in effect with the price of copper above the 24-cent peril point.

## NICKEL

On September 15, 1959, General Services Administration announced that it was offering the U.S. Government-owned nickel plant at Nicaro, Cuba for sale and that purchase proposals would be received until the close of business on December 1, 1959. The Government-owned Nicaro properties constitute an extensive self-contained industrial community. Included among its assets are a metallurgical extraction plant of 50 million pounds of nickel capacity per year, ore reserves, transportation systems, laboratories, pilot plants, shops, warehouses, deep-water ports, airplane-landing strip, and a complete townsite, with related facilties.

The title to the Nicaro nickel plant, including certain ore bodies, is vested in the Cuban Nickel Co., a Cuban corporation, all of whose stock is owned by the U.S. Government.

The Nicaro plant, originally a facility of 30-million pound annual production capacity, was built during World War II with funds provided by the Reconstruction Finance Corporation. Construction was started in March 1942 and initial production started in December 1943. The initial cost of the plant was $32.8 million. For 40 months the plant was operated by Nicaro Nickel Co., a wholly owned U.S. subsidiary of Freeport Sulphur Co. Prior to closing down the plant on March 31, 1947, approximately 63.5 million pounds of nickel were produced with an operating deficit of about $3 million. Subsequent efforts on the part of the War Assets Administration to sell the plant, subject to limitations of the National Security Clause, were unsuccessful and, in December 1949, the plant was placed in the National Industrial Reserve under the custody of GSA.

Early in the Korean war, when nickel again became critically short, the Munitions Board authorized GSA to reactivate the plant and the Congress appropriated $10.3 million for this purpose. The total rehabilitation cost amounted to $12.1 million, of which $1.8 million was provided from the revolving fund of the Defense Materials Procurement Administration. When production was resumed in January 1952, GSA entered into an agreement with the Nickel Processing Corp. (26 percent of the stock owned by Cuban interests), a subsidiary of the National Lead Co., to operate the plant for a 5-year term. This operating agreement expired June 30, 1957, but has been extended for three successive 6-month periods and then late in 1958 for a 2-year term expiring December 31, 1960.

Because of the accelerated defense demand for nickel which continued through 1953, ODM (now OCDM) authorized the expansion of the plant from about 30 million pounds of nickel to its present capacity of 50 million pounds annually. The expansion was started late in 1954 and completed in March 1957 at a cost of $35.8 million. The DPA borrowing authority fund was used to finance this expansion. Until mid-1956 a substantial portion of the nickel produced was placed in the national stockpile. Since May 1956 all of the production has been sold to industry or held in the DPA inventory.

The gross cost of the fixed assets of the Nicaro plant as of June 30, 1959, totaled $85.1 million. The cumulative amortization as of that date amounted to $20.9 million, leaving a depreciated plant cost of $64.2 million. The current assets total about $27.8 million, of which $21.9 million represented inventory of nickel products. The total assets of the Government's company (Cuban Nickel Co.) on June 30, 1959, was $95.5 million including ore deposits and ore rights, with current liabilities totaling $2.4 million including deferred ore payments and the reserve for self-insurance.

In 1957 GSA initiated action to obtain necessary clearances from the Departments of Defense, State, and Commerce, and from OCDM, for the disposal of the Nicaro property. Initially the reaction of the interested agencies was that, in the interest of national security, the Government operation should be continued, or leased to private industry subject to stipulated limitations on the disposal of the nickel produced. However, in a letter dated July 8, 1957, the Director of ODM indicated agreement to a sale or lease provided that 75 percent of the output of the plant be offered for sale in the United States until such time as our Government consider that the supply of nickel annually available in this country, without Nicaro production, is ample to meet national security requirements.

On August 16, 1957, the Administrator of GSA wrote the Secretary of Defense and requested that he authorize disposal of the plant pursuant to authority contained in the National Industrial Reserve Act of 1948.

The National Industrial Reserve Act of 1948 authorizes the Secretary of Defense, when he deems such action in the interest of national security, to authorize the disposition of property carried in the national industrial reserve or to direct the leasing of such property. The act contains a "national security clause" providing for terms, conditions, restrictions, and reservations in instruments of sale or lease to guarantee the availability of such property for the purposes of national defense at any time when availability thereof for such purposes is deemed necessary by the Secretary of Defense.

In a letter dated September 18, 1957, to the Administrator of GSA, the Secretary of Defense withdrew his earlier objections to disposal, and agreed to offering the property for lease, with the understanding that GSA might also secure alternate proposals for purchase, and agreed to consider such proposals if recommended as being in the best interest of the United States.

GSA publicly disclosed its intention to disposal of Nicaro, and stated that the terms and conditions of disposal and a request for proposals would be announced at a later date. A number of U.S. industries indicated their interest in acquiring the property and were furnished information concerning the operation, and several sent representatives to inspect the plant.

After receipt of a request from GSA dated October 1, 1958, the Secretary of Defense removed the Nicaro property from the National Industrial Reserve. The Director of OCDM had given his concurrence in this action to the Secretary of Defense in a letter dated November 7, 1958.

The internal situation in Cuba, including questions relating to taxes, resulted in a deferment of the sale or lease of the property.

According to GSA, conditions did not appear favorable for a sale offering prior to July 1959. On August 18, 1959, the Administrator of GSA advised certain interested agencies that GSA was proceeding to request proposals for the purchase of Nicaro immediately. In a letter dated September 2, 1959, the Director of OCDM advised GSA of his concurrence in soliciting proposals, indicating that the national security interests would be adequately protected by retaining a majority ownership in American hands for at least 5 years.

The Freeport Sulphur Co., through its wholly owned U.S. subsidiary, the Cuban American Nickel Co. (the parent company of the Moa Bay Mining Co.) is constructing facilities at Moa Bay, Cuba (40 miles east of the U.S. Government-owned Nicaro nickel plant) for mining and concentrating of nickel-cobalt ore and a refinery at Port Nickel, near New Orleans, La. for production of metallic nickel and cobalt from the ore concentrates to be shipped from Moa Bay.

On March 8, 1957, the General Services Administration concluded an agreement with the Cuban American Nickel Co. under which the company has the right to tender to the Government during the period ending June 30, 1965, up to the first 271 million pounds of nickel produced and up to 23.8 million pounds of cobalt produced with that nickel at market prices prevailing on the date of the agreement—namely, 74 cents per pound for nickel and $2 per pound for cobalt. The obligation of the Government to accept tenders of nickel and cobalt will terminate prior to June 30, 1965, if the cash return to Cuban American Nickel Co. reaches $98,129,000.

The Freeport Sulphur Co. reports that the Moa Bay project and the Port Nickel facilities involve an investment of $119 million. Of the total capital requirements of $119 million, Freeport has indicated that six major steel and automobile companies, all large consumers of nickel, agreed to lend the Cuban American Nickel Co. $25,500,000. The six companies were given the right to purchase over a long term substantial amounts of nickel at market prices, but at not less than 74 cents per pound during the period in which nickel may be tendered to the Government. During this period the six companies are committed to purchase substantial portions of the output when the market price of nickel is not less than 74 cents per pound. On the basis of the arrangement with the six industrial companies, Freeport has indicated that it may be that much, and perhaps all, of the output will be sold to private industry, and that the Government will not be required to purchase any of the nickel produced. This does not necessarily apply in the case of cobalt. The contract provides that the right to tender cobalt to the Government shall pertain to the cobalt produced during the production of the first 271 million pounds of nickel but not more than 23.8 million pounds of cobalt.

As of June 30, 1959, it was reported that the Moa Bay facilities were approximately 83 percent complete, while the refinery located at Port Nickel, La., was about 98 percent complete. Commercial operations are expected to start before the end of 1959 with the production rate increasing materially during the first half of 1960.

## TITANIUM

Conditions in the domestic titanium metal industry going into fiscal year 1960 showed general improvement with substantial gains reported in sponge and scrap consumption, ingot production and consumption, and production of mill products to supply a more active commercial market. Production of sponge metal and of titanium tetrachloride used for making sponge had decreased during the preceding year, however.

Fiscal year 1959 was marked by the achieving of a balance between production and consumption of sponge metal and inventories were reduced. Consumption rose from 2,836 tons in fiscal year 1958 to 5,347 tons in fiscal year 1959 while production fell from 8,642 tons to 5,103 tons. Domestic producer stocks totaled 699 tons on June 30, 1959, as compared with 1,300 tons a year earlier.

The following comparisons further reflect conditions in the industry which suffered a severe setback when military requirements for the metal were slashed in the spring of 1957:

Scrap consumption increased from 855 tons in fiscal year 1958 to 2,070 tons in 1959, accompanying the rise in production of ingots and mill products.

Output of ingots increased from 3,677 tons in fiscal year 1958 to 7,642 tons in 1959. This was matched by an increase in ingot consumption from 3,893 tons to 7,096 tons. Consumption of 2,129 tons of ingot in the final quarter of fiscal year 1959 was the highest quarterly amount in 2 years.

Production of titanium mill products in the January–July period of 1959 was 42 percent above the same period of 1958, or 4,202,309 pounds compared with 2,958,399 pounds. Average for the first 7 months of the calendar year 1959 was 600,330 pounds or two-thirds the monthly average for the peak year of 1957.

The slump in production of titanium tetrachloride from 35,400 tons in fiscal 1958 to 21,800 tons in 1959 compared percentagewise with the drop in sponge metal production.

Sponge imports, including metal imported under Commodity Credit Corporation agreements, dropped from 1,982 tons in fiscal year 1958 to 1,858 tons in 1959.

It may be noted that titanium metal has had commercial importance only since 1948 when domestic production was 10 tons. Production of sponge reached a peak of 17,249 tons in calendar year 1957 but fell to 4,585 tons in 1958 before turning stronger in the first 6 months of 1959 when it totaled 2,654 tons.

### *Expansion contract deliveries completed*

Termination of sponge purchases under Government contracts with producers during fiscal year 1959 contributed to the close balance between supply and demand. Receipt of 370 tons of sponge by the General Services Administration completed deliveries to the Defense Production Act inventory under expansion contracts allowing maximum tenders of 44,500 tons. Actual deliveries totaled only 22,475 tons, however, as a result of the Government electing to terminate contracts when requirements for the metal dropped sharply.

A GSA report of June 30, 1959, showed 13,585 tons of stockpile-grade titanium sponge in the DPA inventory, 690 tons held tempo-

rarily in the CCC inventory, and 4,256 tons in the supplemental stockpile. In addition, there were 8,891 tons of nonstockpile-grade sponge in the DPA inventory, of which GSA was preparing to sell 17½ tons.

Imports of Japanese sponge for fiscal year 1959 totaled 1,248 tons, of which the Government received 910 tons under CCC barter agreements and commercial titanium smelters the balance. Remaining to be delivered to the CCC inventory were 4,074 tons under two contracts executed prior to fiscal year 1959 when sponge was removed from the eligible list for barter.

The final, 370-ton delivery of sponge to the DPA inventory was made by the Union Carbide Metals Co. (formerly Electro Metallurgical Co.) under a stretchout agreement which followed the Government's decision on February 4, 1957, to terminate a contract which originally provided maximum tender rights of 37,500 tons. The company delivered a total of 8,495 tons for which the Government paid $45,813,000. The Government also is obligated to make an amortization payment of $19,961,000 to Union Carbide, providing no more sponge is produced at the Ashtabula, Ohio, facility. An initial installment of $4,720,000 was paid May 1, 1959, and the Government scheduled three more annual installments. The plant was operating at less than 5 percent of capacity when it was closed in July 1959 as a result of the steel strike and the company issued notice the plant would not reopen.

The General Services Administration announced on September 10, 1959, that it had contracted with a commercial real estate broker to sell the 6,000-ton Government-owned sponge plant at Chattanooga, Tenn. The facility was built in 1953 with a $25 million Government advance to Cramet, Inc., which terminated its contract in March 1958 owing to the reduced demand for titanium metal. The Government assumed ownership, halted production a month later, and offered the plant, raw materials, and products for sale or lease as surplus to Federal needs. One million pounds of titanium tetrachloride and about 325 tons of offgrade titanium sponge were sold by GSA. During fiscal year 1959, GSA received 6,305 tons of rutile ore costing $1,044,000 and deliverable under terms of the Cramet contract settlement. The Government was scheduled to take an additional 14,000 tons of rutile at a cost of $2,503,000. Previously, Cramet delivered 5,510 tons of sponge metal to the DPA inventory and was paid $46,016,000. At the close of fiscal year 1959, GSA estimated the probable ultimate net cost of the Cramet contract at $50,717,000.

*Sponge capacity versus requirements*

Basic annual capacity of domestic sponge plants was figured at 23,100 tons in September 1959, including the 7,500 tons of the Union Carbide facility which must be kept on a standby basis under terms of the Government contract. Other sponge producers and annual capacities were:

Titanium Metals Corp. of America: 7,000 tons including 3,600 tons provided by DPA expansion contract.

E. I. du Pont de Nemours & Co., Inc.: 4,300 tons including 2,700 tons provided by DPA expansion contract.

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Mallory-Sharon Metals Corp.: 2,500 tons. Capacity of this privately financed facility could be doubled within 3 months by adding retorts and thus raise total domestic capacity to 25,600 tons.

Dow Chemical Co.: 1,800 tons provided under a DPA expansion contract. This plant, shut down in the summer of 1957 but held at ready under terms of the contract, was scheduled to be kept on a standby basis through 1961. However, in September 1959 GSA was considering releasing Dow Chemical from this obligation.

Industry sources forecast a requirement for some 5,500 tons of sponge, or about 25 percent of basic domestic capacity, to produce 3,500 tons of titanium mill shapes in calendar year 1959. One producer, who estimated it will take the industry 5 years to obtain the production peak of 1957, indicated that difficulties have resulted due to such factors as aiming all productive research and sales effort at one market, subsonic aircraft; inadequate research for diversified applicataions before heavy production began; and design specifications for the jet age which went beyond the metal's proven capabilities.

*Sponge and mill prices*

Prices of titanium sponge dropped for the 11th time in less than 6 years on August 1, 1959, when grade A–1 metal was quoted 22 cents a pound below the price of October 1, 1958, and grade A–2 metal 20 cents lower. The 1948–59 price decline is shown in the table below:

*Titanium sponge*

[Price per pound]

| Date of change | Grade A–1 | Grade A–2 | Date of change | Grade A–1 | Grade A–2 |
|---|---|---|---|---|---|
| Initial price, 1948 | $5.00 | | July 2, 1956 | $3.00 | $2.70 |
| Apr. 1, 1954 | 4.72 | $4.46 | Dec. 5, 1956 | 2.75 | 2.50 |
| Dec. 1, 1954 | 4.50 | 4.00 | June 4, 1957 | 2.25 | 2.00 |
| Apr. 1, 1955 | 3.95 | 3.50 | Apr. 1, 1958 | 2.05 | 1.85 |
| Nov. 1, 1955 | 3.75 | 3.25 | Oct. 1, 1958 | 1.82 | 1.70 |
| Nov. 23, 1955 | 3.45 | 3.15 | Aug. 1, 1959 | 1.60 | 1.50 |
| May 15, 1956 | 3.25 | 2.95 | | | |

Base prices of mill products of commercially pure titanium declined in May 1959 for the eighth time in a little more than 5 years. Prices for items listed below are subject to extra charges for special sizes, gauges, and finishes, alloying, and quantities of less than 10,000 pounds:

*Titanium mill products*

[Price per pound]

| | May 1959 | May 1958 | June 1957 |
|---|---|---|---|
| Sheet | $7.75 | $9.10 | $10.10 |
| Strip | 7.25 | 8.50 | 9.50 |
| Plate | 5.25 | 6.00 | 8.00 |
| Wire | 5.75 | 6.50 | 7.50 |
| Forging billets | 3.55 | [1] 3.80 | 6.00 |
| Hot-rolled forged bars | 4.25 | [1] 5.10 | 6.50 |

[1] Price changed in October 1958.

*Trends in titanium applications*

Engine and airframe structures of future air weapon systems will use twice as much titanium as they did in 1959, according to a report published at midyear by the Battelle Memorial Institute and made at

the request of the Assistant Secretary of Defense for Research and Engineering. Titled "Future Application Trends for Titanium and Steel in Military Aircraft," the report was based on a survey of more than 80 aircraft companies and Government agencies and covered usage of the 2 metals anticipated in airframe and engine units likely to be in production from 1961 through 1968.

It was predicted in the report that in 1961 titanium will account for 2 percent of the weight of airframes (including solid propellant rocket casings and liquid propellant tankage) and 4 percent of the weight of engines; that in 1965 both figures will be 8 percent; and in 1968, 9 percent. The report said these figures may be considerably higher, reaching a possible peak in 1965 of 34 percent in airframes and 10 percent in engines. For steel alloys considered as alternatives to titanium in a given application, the predicted usage figures were 16 percent of the airframe weight in 1961, 45 percent in 1965, and 39 percent in 1968. Percentage of engine weight forecast for steel for all three periods was 24. Estimates were based on the following important considerations:

1. Both manned and unmanned air weapon systems will probably persist throughout the 1961–68 period.

2. Unmanned vehicles will become lighter and simpler as a result of a decided shift to solid propellant missiles in the early 1960's. Manned vehicles, meanwhile, will get heavier and more complex as greater speed, range, and altitude is sought.

3. On a basis of strength and weight, titanium alloys generally will continue to prove the most efficient structural materials available through 1968 for services at temperatures to 1,000° F., or to 1,400° F. for short periods of time. The advent of high performance solid propellant rocket engines will increase the importance of tensile criteria. At the same time, higher temperatures will restrict the use of titanium in air-breathing engines designed for speeds of mach 3 and above. Titanium will replace more and more of the lower performance, lighter metals in new engines designed for speeds under mach 3.

4. Airframes in all but one or two of the systems studied will remain cool enough for extensive titanium usage despite continually increasing temperature and loading environments throughout the 1961–68 period. Structural exceptions will be nose cones and leading edges.

5. Titanium alloys will continue to be less available and more expensive than alternative steels in the 1960's. Generally, fabrication feasibility for titanium and steel alloys will be about the same except for brazing of honeycomb sandwiches and welding which will be more difficult in the case of titanium.

Titanium is established as a useful airframe material and will become even more important in the foreseeable future, according to the report, but actual titanium usage in missiles will not be great until alloys demonstrate a marked superiority to steel in welded, high performance, solid propellant rocket motor cases and/or there is a significant reduction in the price of "reasonably weldable," high strength, titanium alloy sheet.

A later report on titanium by Battelle Institute's Defense Metals Information Center in October 1959 stated that the gradual solution of fabrication problems leading to increased reliability of performance has steadily paved the way for greater application of titanium in air-

craft. Usage of titanium in aircraft structures has grown slowly but steadily, on a per unit basis, since the metal was introduced into aircraft in 1952, according to the report dealing with solutions to fabrication problems related to microstructure, high strength, and reactivity.

*Titanium's space-age challenge*

Titanium went into orbit around the sun in 1959, a year which saw this promising metal being tested for solid rocket motor cases and making inroads in the liquid rocket field.

Early in the year, a titanium fourth stage carried the Pioneer IV scientific probe into a sun orbit to become the first American object rocketed out of the earth's gravitational field. Use of titanium instead of steel made it possible to add 2 pounds—about 20 percent—to the payload.

Titanium was being tested later in the year for the second-stage case of the Polaris and cases for both stages of the Pershing, solid propellent missiles undergoing development or testing. First large-scale use of the metal in liquid-fueled rockets was in the helium bottles employed in the Atlas, where a typical weight comparison was 50 pounds for titanium, 80 pounds for aluminum, and 125 pounds for a bottle made of steel.

The titanium industry has reported progress in the use of titanium for solid rocket cases, which demand strength, light weight, and dependability. Also, the material must be relatively inexpensive.

Steel has the advantage of low cost, knowledge about its properties, and strength. Although it is the strongest rocket case material available, steel is also one of the heaviest. Titanium is much lighter, and a leading producer has reported the development of a new alloy with tensile strength approaching that of steel but with a superior strength-to-weight ratio. Cost poses a major hurdle for titanium, however. Mill titanium for rocket cases costs about $7 a pound compared with about $1.50 for special steel. Scrapping of the Pershing missile titanium program was indicated late in 1959 because of Army budget limitations. Knowledge of titanium's properties increased during the year, better alloying increased the metal's density, and high-temperature aging improved its strength considerably. Titanium has a corrosion-resistance advantage over steel, an important factor for such weapons as the Polaris and Minuteman which must be stored for long periods of time in places where they might be subject to rusting or attacks by salt water.

*Progress in industrial applications of titanium*

Activity in the titanium metal industry during fiscal year 1959 and the early months of fiscal year 1960 is indicated by the following information from industry and Government sources:

Titanium Metals Corporation of America announced the formation of a new company with Deutsche Edelstahlwerke (DEW), Germany's leading producer of specialty steels. The new company, known as Continental Titanium Metals Corp. (Contimet), is jointly owned by TMCA and DEW, had main offices in Luxembourg, and planned to produce titanium mill products at the DEW steel plant in Krefeld, West Germany.

The New Jersey Zinc Co., a titanium pigment producer, continued to develop its fused salt electrolytic process for producing titanium metal from titanium tetrachloride. The company had completed pilot plant studies in 1957 on the production of titanium tetrachloride from either ilmenite ore or titanium slag.

Allied-Kennecott Titanium Corp. deferred plans to produce titanium metal commercially. The company announced it had developed its process through the pilot-plant stage and could start commercial production whenever demand warranted.

Titanium melters were Harvey Aluminum, Inc., Oregon Metallurgical Corp., Hawkridge Metals Corp., Crucible Steel Co., Republic Steel Corp., Mallory-Sharon Metals Corp., and Titanium Metals Corporation of America. The two latter firms and Du Pont are still producing sponge. Oregon Metallurgical produced ingots and castings and the other melters produced and processed ingots into mill products such as sheet, strip, plate, forging billets, and bars. Harvey produced titanium castings in addition to other mill products, and the Ladish Co. processed ingots into forged products.

The Norton Co., Worcester, Mass., developed an electrolytic process which produces titanium crystals or dendrites which are about 99.6 percent pure with a brinell hardness of 157. They can be used in this form or put through a second refining to increase purity to 99.8 percent and reduce the hardness number to 110, well within the Government stockpile grade limit of 120 set December 10, 1956.

Republic Steel in 1959 received what may have been the largest single commercial order for titanium ever placed—15 tons of draft tubes, valves, piping, internals, and nozzle linings for Freeport Nickel Co.'s new nickel extraction plant at Moa Bay, Cuba. The metal proves to be the most practical material capable of resisting the highly corrosive and eroding slurries of cobalt, nickel, and sulphuric acid at elevated temperatures and pressures. Freeport also is using titanium for similar purposes at its Port Nickel, La., refinery.

Mallory-Sharon announced an agreement with Bridgeport Brass Co. whereby the metallurgical know-how, fabricating facilities, commercial organization, and management resources of Bridgeport would be made available to the integrated titanium firm. In exchange, Bridgeport was given an option to purchase an equal interest in Mallory-Sharon with P. R. Mallory, Sharon Steel Corp., and National Distillers & Chemical Corp.

Mallory-Sharon was authorized in September 1959 to carry out sheet rolling programs on two high-strength titanium alloys for the Department of Defense.

Union Carbide announced the development of a new titanium alloy containing about 0.1 percent palladium, and stated that addition of the noble metal gives titanium resistance to corrosion in reducing acids without impairing its resistance in oxidizing acids.

The Bureau of Mines reported the new commercial jet transports, Convair 880, Douglas DC–8, and Lockheed Electra, were using hundreds of pounds of titanium and that aviation uses of the metal continued to predominate. Industrial applications were increasing through intensive end-use research by the producers, however. Titanium was used on surfaces of mixers in contact with chlorides and chemicals used by the pulp and paper industry and applica-

tions in contact with acids, hypochlorites, and brines in chemical process plants. Marine applications were developed including such potential uses as fuel tanks, sea-water condensers, mufflers, and exhaust pipes. Pure titanium was used to form flexible tubing with a 0.050-inch inside diameter and a 0.115-inch outside diameter as a casing for control wires in atomic reactors.

*Bureau of Mines titanium research*

The Bureau of Mines continued to center its metallurgical studies on titanium in 1959 and launched a research program designed to develop efficient methods for using the Nation's titanium minerals.

Under a contract with the General Services Administration, the Bureau began operation of a 10,000-ampere electrolytic cell to evaluate the commercial feasibility of its processes for recovering titanium metal from titanium scrap and other titaniferous materials. The cell has produced 100 pounds of high-purity titanium metal a day from a low-grade titanium metal feed. Future work was aimed at determining optimum conditions for the process.

Bureau projects announced for fiscal year 1960 and being conducted at 10 Bureau experiment stations and offices across the Nation include investigations of titanium resources, mineral processing, and extractive metallurgy. Bureau metallurgists emphasized investigations of processes, began a study of the vapor-phase reduction of titanium tetrachloride with active metals, and planned to complete research on the two-stage reduction process involving sodium and titanium tetrachloride.

Laboratory studies on improving the Bureau's fused-salt method for recovering high-purity titanium metal from scrap and other materails were continued. The Bureau also sought ways to improve its method for melting and casting titanium metal, including work on centrifugal and spin casting and the development of permanent and expendable mold designs and materials for casting the metal. Other research was aimed at developing new alloys and evaluating the properties of metal produced. The Bureau also was collecting and interpreting economic and technical information essential to Government and industry.

*Standards for sponge and alloys established*

The Bureau of Standards contract with the General Services Administration to establish standard samples of titanium sponge and expedite the preparation of titanium alloy standards terminated March 29, 1959. Standards for sponge and some alloys were established and prepared for issue. The Bureau of Standards continued working on the other alloys under its own program.

## DISPERSAL

In the 1956 amendments to the Defense Production Act the policy of the Congress with respect to dispersal was set forth in the language which follows:

> In order to insure productive capacity in the event of such an attack on the United States, it is the policy of the Congress to encourage the geographical dispersal of the industrial facilities of the United States in the interest of the national

defense, and to discourage the concentration of such productive facilities within limited geographical areas which are vulnerable to attack by an enemy of the United States. In the construction of any Government-owned industrial facilities, in the rendition of any Government financial assistance for the construction, expansion, or improvement of any industrial facilities, and in the procurement of goods and services, under this or any other act, each department and agency of the executive branch shall apply, under the coordination of the Office of Defense Mobilization, when practicable and consistent with existing laws and the desirability for maintaining a sound economy, the principle of the geographical dispersal of such facilities in the interest of national defense. Nothing contained in this paragraph shall preclude the use of existing industrial facilities.

During the 85th Congress bills were introduced calling for semiannual reports to the two Houses of Congress from the executive branch of the Government on dispersion of industry. The Banking and Currency Committee of the Senate, in commenting on these bills, made the following observation:

> The committee expects the Joint Committee on Defense Production to keep in touch with activities in the field of dispersal and to review carefully the reports which will be made by the Office of Defense Mobilization.

Prior to the passage of the dispersion amendment to the Defense Production Act in 1956, dispersion had been an announced policy of the executive branch of the Government beginning on August 10, 1951. Recognizing that capacity so essential to our national defense and to our survival lies within a relatively few densely built-up centers, the policy statement issued by the President in 1951 directed that satisfactory standards of dispersal be applied to the greatest extent practicable to certificates of necessity, allocations of critical materials, emergency loans, locating facilities built by the Federal Government, and the awarding of defense contracts.

In July 1952, a panel, headed by Gen. Otto L. Nelson, Jr., vice president of the New York Life Insurance Co., completed a report on the reduction of urban vulnerability. This report was submitted by General Nelson, as the director of the study on this subject, known as Project East River, to the Secretary of Defense, the Administrator of the Federal Civil Defense Administration, and the Chairman of the National Security Resources Board. The panel of Project East River was established to study measures for reducing the vulnerability to strategic attack on centers of population and industry in terms of defense by space and defense by structures. The report states in part as follows:

> The problem is concerned primarily with less than 100 urban concentrations in which a major proportion of both the population and the industrial power of the United States is concentrated. The panel concludes that it is possible, within a reasonable time, (1) to redevelop the older central cities at lower densities and to guide new metropolitan growth so as to reduce very significantly the effect of any one attack or series

> of attacks (defense by space); and (2) to build enough resistance into existing and new structures which must be exposed to the possible effects of modern weapons to prevent a very substantial percentage of possible casualties (defense by structures).

On May 4, 1955, Dr. Arthur S. Flemming, Director of the Office of Defense Mobilization, wrote Gen. Otto Nelson and stated that Secretary of Defense Wilson, Federal Civil Defense Administrator Peterson, and he joined in inviting General Nelson to head a committee to review Project East River recommendations in the light of the then present developments. Reference was made to the perimeter for target areas being obsolete and to fallout.

The report of the 1955 Review Committee was submitted on October 17, 1955 (more than 4 years after the dispersion policy was first issued), and signed by Otto L. Nelson, as Chairman, and by 13 other members of the 1955 Review Committee. It was stated in this review that it was necessary to report that the Nation's preparations and progress in nonmilitary defense were still far from what they should be, and that there had been lipservice but not the positive leadership needed in the field of nonmilitary defense. General Nelson and the Review Committee further stated that while the previous study had placed great stress on the reduction of urban vulnerability it was disappointing to observe that such little progress had been made. General Nelson and his Review Committee concluded that the urban-defense standards previously proposed were sound and appropriate, but had not been applied. This Review Committee further concluded that if advantage were taken of every situation over a 10-year period a general and significant dispersion could be achieved easily.

The 1955 Review Committee repeated the recommendation which was made in the study in 1952—

> that the Federal Government demonstrate the importance of reducing urban vulnerability in general by taking the lead in setting an example through the application of urban-defense standards to all of its own building programs, and to give every possible encouragement to the spreading out and proper spacing of new developments.

In the annual report which was issued by this committee following the passage of the dispersal amendment to the Defense Production Act and the report of the 1955 Review Committee, the Joint Committee on Defense Production stated as follows:

> One major unresolved problem is that of determining the practical limits of dispersion, both on a voluntary basis and with Government assistance. Recent disclosures on the effects of radiological fallout may have increased the difficulty of determining these limits. It is important that a responsible estimate of the outlines of that problem be made.

In response to a request from this committee, the Director of the Office of Defense Mobilization submitted a report on "Reducing Our Vulnerability to Attack" on May 20, 1957. Shortly thereafter this committee, in issuing the seventh annual report, made the recommendation which follows:

> The Defense Production Act, as approved on June 29, 1956, was amended by adding language to the statement of policy to give congressional approval to dispersion. The Defense Production Act relates dispersion to the construction of Government-owned industrial facilities, Government contracts, loans, and the procurement of goods and services. The reports furnished on dispersion in response to the requests of this committee indicate that the results have not been significant to date. It is recommended that the Office of Defense Mobilization review the results of Operation Alert 1957 for the purpose of determining the extent to which industrial facilities essential to national defense are vulnerable to attack, and that this committee be furnished with a report of the information revealed by Operation Alert 1957 relating to the advantages or disadvantages of dispersal in the event of an attack, and information on the stockpiling of approximately 50 survival items.

Not having received a report setting forth the advantages and disadvantages of dispersal, in issuing the eighth annual report this committee recommended in part as follows:

> Your committee recommended in the previous annual report that the Office of Defense Mobilization review the results of Operation Alert 1957 for the purpose of determining the extent to which industrial facilities essential to national defense are vulnerable to attack, and that this Committee be furnished with a report of the information revealed by Operation Alert 1957 relating to the advantages or disadvantages of dispersal in the event of an attack. This Committee has not been advised as to the action taken with respect to this recommendation. It is recommended that a report covering the above portion of recommendation No. 5 in the seventh annual report be submitted to this Committee not later than March 31, 1959, and that such report include similar information for Operation Alert 1958.

On May 28, 1959, the Director of the Office of Civil and Defense Mobilization submitted a report on the analysis of industrial vulnerability arising from Operation Alert 1958 and the advantages and disadvantages of dispersion. The report contains the following statement on the advantages and disadvantages of dispersion:

> The analysis of this "exercise" attack pattern suggests that while additional dispersion could have been helpful in reducing industrial vulnerability, of perhaps greater importance would be steps to protect the work force from fallout and to improve the capability of surviving plants to continue operating despite the loss of some normal sources of supply.
>
> Clearly, the physical protection of industry is improved by the greatest practicable degree of dispersion combined with adequate protective facilities. Through effective industrial dispersion, the vulnerability of industrial resources is reduced, the probability of survival is enhanced, and the probable rate of postattack recovery is increased. This principle is supported not only by the results of Operation Alert

1958 but also by many other studies which show that the industries which are more dispersed suffer less damage and recover more rapidly than the industries which are geographically concentrated.

The objective of industrial dispersal can only be achieved when industrial and economic factors contribute to this purpose. To a significant extent, the development and growth of the economy itself results in considerable dispersal as new plants are located in new or outlying areas on the basis of normal economic advantages resulting from access to raw materials, labor supply, and new and expanding markets. There is a continued trend of maximum growth rates in the West and South with slower growth in the Northeast and Middle Atlantic regions. This causes a continuing diffusion of industry throughout the United States resulting in reduced vulnerability to attack.

However, normal economic factors also act as a powerful spur to the expansion of capacity in the areas that are already highly concentrated. Several basic changes are taking place in the size and distribution of metropolitan centers throughout the United States. These trends, established by census data through 1950, and extended to 1975, are more likely to continue than they are to be reversed. The data indicates a rather significant increase in our metropolitan population by 1975. It is very likely that by 1975, we may have residing in about 200 metropolitan areas of 100,000 or larger, a population larger than the total U.S. population in 1940.

The faster rates of suburban as opposed to central city growth are likely to be maintained for the coming decades. In 1950, about 42 percent of the total population living in the principal metropolitan areas of the United States were residing outside the central city boundaries, with 58 percent of this population residing within the central city. By 1975, if current trends hold up or even diminish slightly, less than half of the populations of metropolitan areas will reside within the central city.

It is important that we develop a capability on the part of each metropolitan area to operate as independently as possible. Local self-sufficiency should be a goal of our planning at all levels.

Countless economic forces press constantly for growing interdependence as our national economy becomes more complex. Nevertheless, each step taken toward local self-sufficiency, with respect to the activities and resources needed for survival, will be a net gain in our national security.

One additional and very important factor bearing on industrial vulnerability is the widespread radioactive fallout which would accompany any nuclear attack and affect to some degree most sections of the United States. Physical equipment and buildings are subject only to blast and thermal damages, whereas the workers are subject to fallout as well. Accordingly, the country cannot reap maximum bene-

fits from industrial disperal without adequate performance in carrying out the national fallout shelter program. Unless our human resources are protected we might have a relative surplus of industrial facilities after an attack due to the greater losses among people.

It is stated in the OCDM report that procurement agencies provide for dispersion as one consideration in the placing of contracts, but it is acknowledged that the effect is marginal. This is attributed to the consideration of other factors, such as price, and the fact that procurement is concerned primarily with capacities in place rather than new construction.

The Office of Area Development, BDSA, Department of Commerce, reports that dispersion advice was provided on 243 sites during the calendar year 1958. The program of the Office of Area Development is designed to afford American industry with information on the effects of nuclear weapons and to assist industry in planning so as to minimize weapons' effects on postattack production capability.

## SMALL BUSINESS

Section 701(a) of the Defense Production Act states that it is the sense of the Congress that small-business enterprises be encouraged to make the greatest possible contribution toward achieving the objectives of the act.

Each department and agency performing functions under the Defense Production Act has been requestd to summarize its activities to encourage small business during the past year. The summaries of these various departments and agencies are included in the appendix of this report.

The Small Business Administration does not have delegated functions under the Defense Production Act; however, a report was requested from the Small Business Administration for inclusion in the annual report of this committee. This was done in order to obtain the views of the one administrative agency having responsibilities which relate principally to small-business problems.

The Department of Defense reports that during fiscal year 1959 the net value of military prime contract awards to small business amounted to $3.8 billion or 16.6 percent of the total awarded to all business concerns in the United States including territories and possessions. Small business received $1.6 billion in subcontracts during the first half of fiscal year 1959 from 257 large contractors.

The Atomic Energy Commission reports that small-business concerns are participating in a majority of the contract actions which are suitable for small business and are receiving a substantial number and dollar volume of the related subcontract awards. In fiscal year 1959, 42 percent of the $571.1 million total AEC subcontract dollars went to small business.

It is reported by the Federal Reserve System that 73 percent of the number and 19 percent of the amount of loans authorized were to borrowers having less than 500 employees, including employees of affiliated concerns under common ownership or control; 57 percent of the number and 12 percent of the amount were to borrowers having assets of under $1 million.

The Department of the Interior reports that approximately 60 percent of all contracts of the Defense Minerals Exploration Administration called for expenditures of $25,000 or less and about 43 percent of them provided for the operator to spend less than $3,000. In excess of 80 percent of the participants were classed as small business based upon financial standing, annual production, number of employees, and prominence in the particular field in the mineral industry. The Department of the Interior also states that a great majority of the 3,600 utility systems in the United States fall into the small-business category.

The Small Business Administration reports that during the fiscal year 1959, Government purchases totaling $1,142,625,361 were jointly set aside by SBA in cooperation with Government purchasing offices for competitive award to small-business concerns. This compares with $1,062,454,031 in set asides for small business in the fiscal year 1958 and $744,335,000 in the fiscal year 1957.

## EXECUTIVE RESERVE

The National Defense Executive Reserve, comprised of civilians who will serve in key Government positions during an emergency, was expected to number about 2,200 persons as of January 1, 1960. This number approaches the goal of 2,500 reservists considered necessary to staff national and regional mobilization headquarters and contribute to the capabilities of Federal departments and agencies having mobilization responsibilities delegated by the Office of Civil and Defense Moblization.

The reserve program, authorized by the Defense Production Act Amendments of 1955 and providing for the selection and training of reservists, permits the enrollment of executives who have broad experience in such critical mobilization fields as production, transportation, construction, manpower, communications, fuels and metals.

OCDM reported the Executive Reserve strength on November 20, 1959, at 1,916 actually designated reservists and estimated that total reserve strength would be increased by 250 to 300 by the end of 1959. Seventeen departments and agencies including a classified agency now participate in the program. The following breakdown shows the gain in enrollments:

| Department or agency | Nov. 20, 1959 | July 1, 1958 |
|---|---|---|
| Business and Defense Services Administration | 1,140 | 746 |
| Department of Commerce (except BDSA) | 160 | 100 |
| Office of Civil and Defense Mobilization | 176 | 111 |
| Interstate Commerce Commission | 86 | 45 |
| United States Information Agency | 69 | 59 |
| Department of the Interior | 60 | 30 |
| Department of State | 55 | 52 |
| Department of Justice | 41 | 33 |
| Office of the Secretary of Defense | 30 | 21 |
| Housing and Home Finance Agency | 30 | 6 |
| Small Business Administration | 21 | 16 |
| Department of the Navy | 15 | 0 |
| Federal Communications Commission | 14 | 3 |
| Department of Labor | 13 | 5 |
| General Services Administration | 3 | 0 |
| Department of the Army | 3 | 0 |
| Total | 1,916 | 1,227 |

The Department of Health, Education, and Welfare will participate in the Executive Reserve program, has issued authority and procedures to its bureaus, and has recommended a total of eight reservists to be assigned to the Office of the Secretary. However, the Department had not reached the point of actual designation of reservists as of November 20, 1959.

Most of the reservists still to be designated will be assigned to BDSA, which will enroll a total of 1,500 executives. BDSA has been designated as the Government's production agency for a war emergency.

OCDM is planning another National Defense Executive Reserve Conference to be held in Washington, D.C., on May 23–24, 1960, with 1,200 to 1,500 reservists participating in general and individual agency training sessions.

### TRANSPORTATION

This committee recommended in its last annual report that the OCDM furnish a report on the current status of the OCDM transportation program and the extent to which each department and agency must rely upon transportation to meet objectives in the event of an emergency.

The Director of the Office of Civil and Defense Mobilization submitted a report on the status of transportation mobilization as of March 31, 1959, which was incorporated in Defense Production Act Progress Report No. 43. The report consisted of three sections: A general discussion of the functioning and control of transportation under various emergency conditions, statements setting forth the dependence of departments and agencies on transportation under emergency conditions, and the status and a projection of the OCDM transportation program.

Statements on transportation dependence were submitted by the Department of Commerce; the Housing and Home Finance Agency; the General Services Administration; the International Cooperation Administration; the Atomic Energy Commission; the Department of Defense; the Department of Agriculture; the Department of the Interior; the Department of Health, Education, and Welfare and the Department of State. The agencies were not asked for detailed facts or data on transportation requirements. Their statements were as follows:

*U.S. Department of Commerce*

> It is our belief that in a post attack period, one of the first tasks confronting the Nation would be the temporary rehabilitation of a suitable transport system capable of moving supplies and people adequately. Prepositioning of supplies does not eliminate the need for adequate transportation, although in some measure it may lessen the total requirement if the devastation is as widespread as is currently assumed.
>
> It is our belief that the organizational structure to control this important segment of our national economy should be so fashioned that controls can be exercised at the regional level and below, in a most effective manner. National direction, if operable, could operate in those vital areas necessary to human survival, such as the airlift of those items easily carried and most effective in conserving of human life.

It is most difficult to comprehend the effect on our national industrial structure, without a reasonably adequate transport system in the event of nuclear war (W. C. Truppner, Director, Office of Industrial Mobilization, Business and Defense Services Administration, U.S. Department of Commerce).

*Housing and Home Finance Agency*

The Housing and Home Finance Agency would have to rely upon transportation for the movement of—

(*a*) Building and construction materials and supplies;
(*b*) Construction equipment;
(*c*) Housing components such as prefabricated panels, etc.;
(*d*) Mobile units such as trailers, etc.

Also, in cooperation with OCDM and other agencies, if it is decided to relocate population from one area to another, this places an additional requirement on transportation.

The nature and extent of the emergency, together with many other factors, would affect our total transportation requirements, so no attempt is made here to estimate requirements (B. Douglas Stone, Director, Defense Planning Branch, Division of Economics and Program Studies, HHFA).

*General Services Administration*

There are 37.2 million short tons of industrial raw materials and 20,000 short tons of machine tools in inventories in GSA custody.

Additionally, GSA has an average monthly total of 48,888 short tons of housekeeping items shipped into and out of depots, plus an estimated 24,267 short tons shipped direct from vendors to consuming agencies.

The above tonnages are dependent upon commercial transportation.

Other agencies' tonnage, for which GSA furnishes traffic management services, have not been included (Samuel J. Scott, Commissioner, Transportation and Public Utilities Service, General Services Administration).

*International Cooperation Administration*

In carrying out the objectives of the mutual security program, ICA relies almost entirely upon commercial transportation of commodities and equipment which it finances. Under Public Law 664 (83d Cong.), now incorporated in the Merchant Marine Act of 1936 as section 901(b), it is mandatory that we use U.S.-flag privately owned commercial vessels for at least 50 percent of the commodities and equipment transported on ocean vessels. Section 413 of the Mutual Security Act of 1954, as amended, requires that this agency use private trade channels to the maximum extent practicable in carrying out our program.

For your information, we attach hereto a listing of total tonnage of commodities and equipment financed by ICA for fiscal year 1957 to 1960, inclusive. The figures for fiscal year 1959 and 1960 are estimates. This listing indicates the

quantity moved by ocean transportation from the United States and from sources other than the United States, as well as the cost of ocean freight paid out by ICA. While this listing indicates the quantity moved by commercial vessels, obviously almost all of it moved from point of origin inland from sea ports and required the use of commercial transportation, such as railways, trucks, etc. (table 1) (Arthur G. Syran, Director of Transportation, ICA).

*Atomic Energy Commission*

AEC's peacetime activities are based on the requirements necessary to fulfill its production, manufacturing, research and development programs during mobilization periods. Therefore, no significant acceleration over present-day activity is anticipated.

In view of the above, AEC's postattack commercial transportation requirements may be expected to equal our present estimated annual rate of 112,000 units (about 93,000 rail and 19,000 motor units) to transport approximately 810 million ton-miles of freight (John A. Derry, Director, Division of Construction and Supply, Atomic Energy Commission).

*Department of Defense*

The reliance of the Department of Defense on the commercial transportation resources of the Nation would vary from reliance on all modes of carriage under one set of emergency conditions to emphasis upon a single mode or a combination of modes in other situations, dependent upon the nature or magnitude of the emergency and/or locale of the theater of operations. Whatever the nature of military requirements, it is anticipated that almost total reliance would be placed upon commercial transportation within the United States to support the national defense.

In assuring the availability of transportation resources to meet military requirements under emergency conditions, the Department of Defense necessarily maintains close and continuing relationships with the land, sea and air carrier industries.

Special programs, such as the war air priority system and the civil reserve air fleet, have been developed to assure the adequacy of transportation resources in the event of an emergency.

The Department of Defense has a continuing program for pipeline construction to major air bases. Eighteen Air Force bases are now connected to commercial pipelines. In addition, tank-truck operators have agreed to commit commercial tank trucks for the delivery of planned fuel requirements.

A lease/storage program, to provide sleeping cars, is in effect to augment rail passenger resources. These cars have been declared surplus to commercial needs, and would otherwise have been scrapped. Ocean-transportation programs provide for the emergency allocation of shipping from either commercial vessel operators or National Maritime

Reserve sources (Earl B. Smith, Director for Transportation and Petroleum Policy, Office of the Assistant Secretary of Defense (Supply and Logistics)).

*Department of Agriculture*

Essential per capita movements of agricultural products during a postattack period should be maintained at as near normal levels as possible, but they could be considerably less than normal rates without endangering the health of our people. Part of the reduction in transportation requirements could be accomplished by controls over the kinds of foods shipped long distances. For example, the postattack diet in many areas might include reduced amounts of fresh and frozen fruits and vegetables and larger amounts of more concentrated food, such as potatoes, oils, and grain products. Our plans call for substantial reductions in shipments of nonedible products, such as animal feeds, cotton, and tobacco, during a period when transportation is most restricted. It is also probable that exports of agricultural products would be drastically curtailed in a period when transportation is severely limited.

The average American now receives about 1,166 pounds of food per year, a total of about 86 million tons for the total current population. The movements of food by truck and rail are currently estimated at 621 million tons, which constitute 120 billion ton-miles. The estimated average distance of rail shipments of food is 440 miles, or a total of about 97 billion ton-miles per year. The average distance of truck shipments of food is estimated at about 50 miles, indicating a total of 23 billion ton-miles. These shipments include other farm products, as well as foods and beverages.

An attack could result in shortages of some types of food and surpluses of others, but distribution would be a major problem. An expected abundance of total foods would make it possible to increase consumption of some concentrated foods to offset reductions in bulky types of food in order to better utilize the available transportation facilities. The significance of adjustments that could be made is indicated by a review of the total shipping used by various types of commodities. Fresh and frozen fruits and vegetables, for example, require about 19 percent of the total ton-miles of shipping used for all edible items, but they provide only 4.2 percent of the calories of the normal diet. Also, agricultural products, not usable as food, utilize about 25 percent of the total transportation used for such products. These types of shipments could be drastically reduced or postponed during a temporary period of greatly restricted transportation.

Both railroad and truck transportation would be essential to agriculture in a postattack period. Railroads now move about 29 percent of the total tonnage of all shipments of food, but, because of the longer hauls, rail shipments constitute about 81 percent of the total ton-miles of all food movements. (See table 2.) While there are some long-

distance food shipments by truck, the bulk of the truck movements of food are from the farm to the local markets and from processors and wholesalers to retail outlets. There are also many short movements from processing plants to other concentration points.

Long-distance truck movements of food account for about 70 million tons and 17 billion ton-miles of shipping. These long-distance movements include about 16 percent of the tonnage and 76 percent of the ton-miles of all food shipments by truck, and about 11 percent of the tonnage and 14 percent of the ton-miles of all rail and truck movements of food.

Food shipments by railroads represent about 13 percent of the total tons and 20 percent of the ton-miles of all railroad freight. It would appear essential that at least half the normal rail transportation per capita be provided for movement of food beginning 2 to 4 weeks after a nuclear attack. Railroad transportation requirements for food would subsequently increase to nearly normal capacity on a per capita basis. In the case of trucks, it would be essential that the amount of postattack truck transportation available per capita for local movements of food be maintained as near to normal as possible in the immediate postattack period. A temporary reduction of about 40 percent in the requirements for total truck transportation might be accomplished by prohibiting long-distance shipments of fresh fruits and vegetables and nonedible items and through limitations on crosshauls. Near normal per capita amounts of truck transportation would be required within 30 days after an attack for the distribution of food to the surviving population (Dwight W. Meyer, Director, Food and Materials Requirements Division, Commodity Stabilization Service, U.S. Department of Agriculture).

*Department of the Interior*

(*a*) *Electric power.*—The production of electric power is dependent upon fuel: coal, oil, and gas. During the year 1956 generation of electric power by these various fuels was as follows:

| Fuel | Billions of kilowatt-hours | Percent |
|---|---|---|
| Coal | 339 | 56 |
| Oil | 36 | 6 |
| Gas | 104 | 17 |
| Hydro | 122 | 21 |
| Total | 601 | 100 |

No commercial transportation is needed in the case of generation from hydro. It will be noted that 56 percent of total generation was from coal. This totaled 161 million tons

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(32.5 percent of the coal used in the United States). Coal during the same period was shipped as follows:

| Mode of shipment | Million tons | Percent of total U.S. shipments |
|---|---|---|
| All rail | 74 | 15.0 |
| River | 37 | 7.5 |
| Great Lakes | 15 | 3.1 |
| Tidewater | 15 | 3.1 |
| Truck | 13 | 2.6 |
| Tramway and conveyor | 6 | 1.2 |
| Total for electric power | 160 | 32.5 |

Utilities, on an average, have about 3 months' stockpile of coal on hand. Consequently, commercial transportation for coal is necessary between D plus 60 and D plus 90 days. The quantity essential for continued operation of generating plants would vary from about 40 to 50 percent of normal by D plus 90 days to about 80 percent of normal by D plus 1 year. Normal methods of coal transportation could be changed in some cases, yet the electric power industry is dependent almost entirely upon commercial transportation for whatever supplies are received.

Oil used by the power industry totaled approximately 68 million barrels and was moved mainly on tidewater by commercial transportation. The industry used 1,200 million MCF of gas moved by pipelines not under the control of the electric power industry.

(*b*) *Solid fuels.*—The coal industry produced 518,040,000 tons of anthracite, bituminous coal, and lignite during the year 1957. Ninety-eight percent of this production required commercial transportation from the producing mine to the consumer. It is reasonable to expect that while coal shipments will be decreased during the survival period, shipments will need to be increased after D plus 30 or D plus 60 days and practically all transportation must come from commercial carriers.

The coke industry used 108,409,000 tons of coal in 1957, practically all reaching the ovens via some form of commercial transportation. The coke industry produced 75,951,000 tons of coke and 4,913,000 tons of breeze during the same year. Large amounts are used by blast furnaces adjacent to the coke ovens. A reasonable estimate indicates that in 1957 shipments by commercial transportation amounted to approximately 25 percent of the 80,864,000 tons of coke and breeze produced. In addition, the shipment of coal chemicals from byproduct coke plants was approximately 4,400,000 tons.

Commercial transportation for solid fuels includes rail, truck, river, lake, and coastwise facilities and various combinations of these types of facilities.

(*c*) *Minerals.*—The metal-mining industry is dependent on commercial transportation for practically all shipments of minerals and raw metals from producing areas to fabrication

plants. During the survival period it is expected that such shipments would practically cease. However, during reconstruction these products will depend on commercial transportation; it is not possible to estimate any time periods as to when commercial transportation would be needed.

(*d*) *Fisheries.*—The domestic fisheries yield catches annually total about 4,750 million pounds. In addition, large quantities of fishery products are imported into the United States; these would, however, probably cease during an emergency.

Nearly all of the domestic catch is received at points on the Pacific and Atlantic coasts and must be transported to consumer centers. In any emergency, fishery products could provide an important source of food in lieu of meat. This is especially so at or near the coastal areas. It is estimated, based on recent exercises, that the fishery fleet could provide fishery products which would require on about D plus 30 days 40 percent of normal commercial transportation; on D plus 60 days, about 60 percent of normal transportation. Transportation required is not necessarily cross country, but could be confined to local areas.

(*e*) *Petroleum and gas.*—During peacetime the petroleum and gas industries rely upon commercial transportation for movement of petroleum as follows:

| | *Percent* |
|---|---|
| Petroleum-pipeline capacity | 100 |
| Tank-truck availability | 100 |
| Tanker availability | 100 |
| Railroad-tank-car availability | 75 |
| Tank-barge capacity | 75 |

While it is expected that the availability of these different methods of transportation would decrease, some quite drastically, during time of national emergency any movement of petroleum products would still be dependent upon what commercial transportation is available (Mr. Edward Frye, Assistant to the Secretary, Department of the Interior).

*Health, Education, and Welfare Department*

(*a*) *Food and Drug Administration.*—The Food and Drug Administration anticipates that it will have to rely heavily upon commercial transportation to carry out its delegated and essential statutory responsibilities in the event of an emergency. Commercial transportation would be needed by the Food and Drug Administration, not only to supplement what may remain of its already meager fleet of automobiles for transportation of personnel, but also for transportation of samples, equipment, and supplies. Mass deployment of FDA personnel from areas of less need to those of greater need, plus recruitment of personnel for emergency service, would necessarily increase the demands on commercial transportation.

(*b*) *Social Security Administration.*—The responsibility of the Social Security Administration during the period immediately following an emergency will be to assist people in

finding security and staying alive. Transportation needs will be related to organizing and moving materials and people to safer areas.

If evacuation is ordered, either total or in part, the SSA will be required to assist in the care of evacuees. In both of these circumstances, we would be compelled to rely upon commercial transportation or transportation provided by Government agencies such as city transportation departments, or the military.

As soon as it is possible to move supplies to people, both evacuees and those who are pinned down by fallout, we would rely in a major way on commercial transportation to do the job. This period will also involve moving of people who may have been sheltered in very temporary quarters, to better shelter; this also will require transportation. The transportation needs in these various activities would include buses or other transportation suitable for moving people, and also trucks for moving supplies.

(*c*) *Public Health Service.*—If PHS is to assume responsibility for the Nation's emergency health care, commercial transportation of varying degrees of magnitude would be required for—

(1) Distribution and redistribution of medical care items and functional units.

(2) Distribution and operational handling of sanitation and water treatment materials and devices, including the placement of heavy equipment associated with operations in the sanitation programs, such as earth moving, burial of the dead, and refuse disposal.

(3) Transportation associated with the necessary supplies, such as food and other commodities required for functional units in a medical care program.

(4) Transportation required for the movement of the nonambulatory ill where indicated to save life or for specialized or long-term treatment.

(5) Transportation for medical personnel for great distances for most effective utilization.

In addition to the commercial-transportation requirements, our activities would require that we be furnished with operational transportation which would be used by health personnal for short distances—i.e., from a health center to an epidemic area, etc. (Mr. Dean Snyder, Defense Coordinator, HEW).

*Department of State*

In the event of an emergency, the State Department would rely on commercial or other transportation for the following purposes:

(1) For the movement of its own personnel, including couriers, and for the carriage of its mail and supplies.

(2) For the evacuation of its personnel and other noncombatant American nationals from affected areas

abroad to safe havens in accordance with existing plans which are scheduled to come into operation in contingencies of this character.

* * * * *

In a different sense, the Department will be relying on commercial or other transportation in the event of an emergency for the fulfillment of programs with which it will be connected but which are not related to serving the Department's own direct needs as, for example, in the following situation:

(1) In the event of an emergency the Department of State would become the claimant agency for friendly foreign countries before U.S. "requirements and allocations" bodies, and it would also be the channel through which requests to meet U.S. requirements will be submitted to foreign countries, both of which activities will create demands on commercial or other transportation.

(2) In a wider sense the Department's purview could be said to extend to programs for the maintenance of adequate overall civil transportation in the international field, in that the Department participates in the preparation of studies and programs connected with U.S. civil aviation mobilization planning for an emergency, insofar as such planning involves international transportation or coordination with our NATO allies. However, since the Department is not the agency primarily responsible for either the preparation or administration of these programs * * * such information is more readily available from other sources, specifically the Defense Air Transportation Administration (DATA), the Agency primarily responsible.

(3) Similar plans for the mobilization of merchant ships flying the U.S. flag and that of friendly allies also come within the range of activities of the Department but the coordinating responsibility therefor lies primarily with the Maritime Administration.

(Lawrence C. Vass, Director, Office of Transport and Communications, Department of State.)

TABLE 1

I. TRANSPORTATION OF ICA-FINANCED COMMODITIES ON OCEANGOING VESSELS

[Long tons]

| | From the United States | From outside the United States | Total |
|---|---|---|---|
| Fiscal year 1957 | 5,006,000 | 3,897,000 | 8,903,000 |
| Fiscal year 1958 | 3,959,000 | 4,241,000 | 8,200,000 |
| Fiscal year 1959 (estimate) | 3,800,000 | 4,200,000 | 8,000,000 |
| Fiscal year 1960 (estimate) | 3,700,000 | 4,100,000 | 7,800,000 |

II. VALUE OF ICA COMMODITY SHIPMENTS

| | Total | Percent U.S. source |
|---|---|---|
| Fiscal year 1957 | $1,235,000,000 | 57 |
| Fiscal year 1958 | 1,013,000,000 | 52 |
| Fiscal year 1959 (estimate) | 1,000,000,000 | 50 |
| Fiscal year 1960 (estimate) | 1,000,000,000 | 50 |

III. COST OF OCEAN FREIGHT OF ICA SHIPMENTS

| | Total | | Total |
|---|---|---|---|
| Fiscal year 1957 | $120,000 | Fiscal year 1959 (estimate) | $85,000 |
| Fiscal year 1958 | 100,000 | Fiscal year 1960 (estimate) | 75,000 |

TABLE 2.—*Estimated volume of food movements in 1955 by railroads and motor carriers*

| Unit and means | Edible item | | Nonedible items | All foods |
|---|---|---|---|---|
| | Perishables | Others | | |
| Million short tons: | | | | |
| Railroads | 13 | 105 | 62 | 180 |
| Trucks | 167 | 177 | 97 | 441 |
| Total | 180 | 282 | 159 | 621 |
| Millions of ton-miles: | | | | |
| Railroads | 17,700 | 52,900 | 26,800 | 97,400 |
| Trucks | 11,500 | 7,200 | 3,900 | 22,600 |
| Total | 29,200 | 60,100 | 30,700 | 120,000 |
| Percent of all foods: | | | | |
| Tons by rail | 2.1 | 16.9 | 10.0 | 29.0 |
| Tons by truck | 26.9 | 28.5 | 15.6 | 71.0 |
| Total | 29.0 | 45.4 | 25.6 | 100.0 |
| Ton-miles by rail | 14.7 | 44.1 | 22.3 | 81.1 |
| Ton-miles by truck | 9.6 | 6.0 | 3.3 | 18.9 |
| Total | 24.3 | 50.1 | 25.6 | 100.0 |

*OCDM transportation program*

The stated objective of the OCDM transportation program "is to assure that the Nation's transportation resources are prepared and capable of meeting whatever demands may be placed upon them in time of emergency." OCDM functions as the coordinating body for Federal activities and as the agency for guidance to State and local governments. The major elements of the OCDM transportation program are:

1. To establish overall policy and program guidance for transportation mobilization and defense.

2. To coordinate and guide transportation preparedness programs of delegate and other Government agencies and of the transport industry.

3. To develop a standby emergency transport organization supported by a strong national defense executive reserve.

4. To direct the collection and machine processing of information on national transportation capabilities, current and postattack.

5. To receive and analyze traffic requirements information and develop measures for allocations, priorities, and movement control.

6. To conduct resource requirements analyses to determine transportation's needs for manpower, fuel, and supplies.

7. To promote the strategic improvement of transportation and industry's ability to accomplish missions in the national defense.

8. To develop operational plans and action measures for accomplishing transportation emergency tasks.

9. To participate in Operation Alert and other exercises and training activities to test plans and improve operational capabilities.

OCDM has revised its assignment of functions to delegate Federal transport agencies. New Executive orders reflecting the revisions will be issued upon their approval by the respective agencies and the Bureau of the Budget. The delegate agencies include the Department of Commerce and its Bureau of Public Roads, Defense Air Transportation Administration, and Maritime Administration; the Civil Aeronautics Board; and the Interstate Commerce Commission.

Some 210 key staff personnel and advisers for an emergency transport agency have been selected by OCDM from various Federal agencies. They constitute the transportation segment of the National Defense Executive Reserve. The agency affiliations of these reservists as of March 31, 1959, were reported by OCDM to be as follows:

| | | | |
|---|---|---|---|
| OCDM | 8 | MARAD | 80 |
| ICC | 86 | BPR | 9 |
| DATA | 27 | | |

Additional personnel for the Transportation Executive Reserve are to be selected by OCDM and further assignments of transportation reservists for service on the regional level will be made. Some 300 other personnel have already been tentatively selected as potential National Defense reservists from transportation industries and professions.

*National transportation plan*

The national transportation plan has been incorporated into the national plan for civil defense and defense mobilization as annex 34. This annex integrates the mobilization transportation programs of several Government agencies into one unified and coordinated master program.

The national transportation plan consists of 7 major sections: (1) a definition of transportation; (2) assumptions upon which the plan is based; (3) general responsibilities between the various levels of Government and between private industry and Government in general; (4) transport mobilization organization; (5) functions requisite for the accomplishment of the emergency transportation programs; (6) standby programs and procedures established by Federal agencies for early implementation in the event of an emergency; and (7) assignments for execution by Federal agencies of the national transportation plan.

"Transportation" in the national transportation plan encompasses the movement of passengers and freight by land, water and air; the

ports and terminals through which they move; and the personnel, equipment, facilities, and storage necessary to accomplish movement. Public warehousing is included in OCDM's concept of transportation because of the relationship between supply storage and supply movement and the traditional association of the latter functions in Government. Excluded from OCDM's definition of transportation were petroleum pipelines and organic transport owned by or preallocated to military departments for their exclusive use and control. Certain aspects of transportation are covered in other annexes to the national plan for civil defense and defense mobilization. These are:

Population evacuation and relocation (Annex 12; Directed Movement).

Agricultural movements and storage (Annex 31; National Food Plan).

Pipelines and petroleum storage (Annex 33; National Energy and Minerals Plan).

Administrative transportation and traffic services provided Federal agencies by General Services Administration (Annex 35; Emergency Administration of Essential Facilities).

Five general principles will be applied in the implementation of the National transportation plan:

1. Transportation lines segmented by attack will be brought back into intercity, interstate, and national systems as quickly as possible.

2. Private ownership and operation of transportation industries shall continue unless the exigencies of the situation dictate otherwise.

3. Shippers will continue to arrange for transportation service directly with carriers subject to embargoes and priorities in force.

4. Government controls over transportation will be only to the degree required by the nature and severity of the emergency.

5. Operational transportation plans will be flexible in order that they may be adapted to circumstances as they arise.

The national transportation plan is supported by specific plans and action measures for the various modes of transportation. Some of the more important of these are:

The Civil Reserve air fleet by which agreements have been signed with commercial carriers to release specific long-range four-engine passenger and cargo planes to augment the military airlift.

The war air service pattern whereby civil air routes, schedules and services will be readjusted to conform to postattack requirements.

The national emergency defense airlift program whereby executive type aircraft exceeding 12,500 pounds have been organized to respond to civil emergency tasks.

The air priorities system for control of air transport space in emergencies.

The NATO shipping pool to consist of commercial ships of the nations of the NATO pact, except ships withheld by countries for specific military purposes.

General agency agreements for operation of wartime shipping to the account of U.S. Government.

Ships warrants procedure for wartime use of docks and repair facilities and for procurement of fuel.

Port utilization controls for the emergency commitment and use of facilities of the major U.S. ports, including the control of traffic in ports.

Standby mobilization orders giving general preference and priority for emergency movements by rail, motor, and inland water carriers.

Standby mobilization orders embargoing freight shipments into areas of attack except movements under permit.

Standby mobilization orders permitting carriers to divert or reroute shipments and to extend operations to facilities of other lines in meeting emergency requirements.

Standby mobilization orders to allow carriers to dispose of undeliverable shipments.

Plans for the regulation of traffic over U.S. highways and for the rerouting of traffic around major target centers.

Plans for the use of alternate port facilities for offshore loading sites, etc.

Transportation annexes to State and city survival plans. (All except two States have such plans.)

Plans of specific transport industries, armored car plan, Great Lakes shipping plans, protection of highway facilities, defense plans of U.S. railroads, and many others.

*Operation Alert, 1959*

OCDM and other Federal agencies conducted an annual exercise for the testing of current plans for civil defense and defense mobilization. This exercise was called OPAL 1959 (Operation Alert, 1959).

A new organizational structure for a standby emergency transportation organization was tested in the 1959 exercise. The transport agency for the exercise was comprised of members of the OCDM transportation staff and representatives from the Interstate Commerce Commission; the Department of Commerce, including the Office of the Under Secretary for Transportation, the Bureau of Public Roads, Maritime Administration, and the Defense Air Transportation Administration; and the Civil Aeronautics Board. Representatives from these same agencies constituted the Seminar Committee on Transportation which was charged with the responsibility of evaluating the transportation phase of the exercise.

Representatives from several other Federal agencies including personnel from interested transportation user agencies and regional offices of OCDM also participated in the activities of the emergency transport agency and in the seminar discussions. Among the additional agencies were the Department of Defense; the Department of Agriculture; the Department of the Interior; the Department of State; the Bureau of the Census, the Business and Defense Services Administration, and the Coast and Geodetic Survey of the Department of Commerce; the Department of Labor; the Post Office Department; the Department of Health, Education, and Welfare; the Atomic Energy Commission; the Housing and Home Finance Agency; and the General Services Administration.

Representatives from the railroad, trucking, maritime, air transport and inland waterways industries and the heads of the transport agencies, or their representatives, were given an extensive briefing on the last day of the exercise.

*Critical transportation problem issues*

Twenty-five mobilization problem issues were developed for resolution or decision for the Director of OCDM. Some of the more critical transportation issues were:

(*a*) What priority determination is to be made between an urgent military and an equally urgent civil survival movement?

(*b*) Should regions be required to honor priorities for movements originating in other regions?

(*c*) How should an appeal of a transportation claim for manpower, fuel or supplies for which lower-than-minimum allocation has been assigned be resolved?

(*d*) Should State authorities have power to commit national (interstate) transport to local emergency uses?

(*e*) Should vessels of friendly powers be detained for the purpose of discharging vital cargoes?

## NATIONAL PLAN FOR CIVIL DEFENSE AND DEFENSE MOBILIZATION

Federal guides to national survival under conditions of massive nuclear attack on this country and to other nonmilitary courses of action attendant to limited war involving the United States were nearing completion in the closing weeks of 1959. The guides, outlined in the "National Plan for Civil Defense and Defense Mobilization," published in October 1958 by the Office of Civil and Defense Mobilization, are contained in some 40 annexes to the national plan developed by OCDM for distribution to State and local governments.

The national plan was described by OCDM as establishing national nonmilitary courses of action and the role of the Federal Government, States, and their political subdivisions and the people to deter aggression and, in the event of aggression, to enable the Nation to survive, recover, and win. OCDM further termed the plan a statement of principles, responsibilities, requirements, and broad courses of action, supported and amplified by annexes subject to necessary revision.

The plan anticipates these principal contingencies:

1. *International tension*, but not of such extreme nature as to require the invocation of full emergency authorities. (It is assumed that periods of extreme international tension may occur. In such cases, when the President or the Congress finds that the national security demands the invocation of extraordinary authority for civil defense programs short of the declaration of a civil defense emergency, civil defense and defense mobilization measures would be accelerated.)

2. *Limited war*, defined as a situation in which U.S. forces are engaged overseas, but in which there is no immediate expectation of nuclear attack on the continental United States. (It is assumed that limited wars may occur in various parts of the world. Depending on size of forces involved, duration of hostilities, kinds of weapons used and degree of U.S. involvement, such limited war may require degrees of mobilization of U.S. resources, production and manpower, and acceleration of U.S. nonmilitary defense as a matter of prudence.)

3. *General war*, including massive nuclear attack. (It is assumed, in the absence of international agreement, that weapons employed in an attack against the United States would be pre-

dominantly of multimegaton yield. The use of biological and chemical agents is possible. Delivery systems in the next few years would be predominantly man-operated, with a resulting probable maximum tactical warning of initial attack of 3 hours for the Nation as a whole; thereafter, delivery systems would be predominantly unmanned, with maximum tactical warning of initial attack reduced to one-half hour for the Nation as a whole. At any time during this period, attack could come with no tactical warning. Strategic warning is a possibility.)

Contained in the plan and its annexes, which may be termed a "blueprint for national survival," are the mission of civil defense and defense mobilization; the responsibilities of all citizens and government at all levels; the organization—OCDM national and regional commands, State and local governments, and military support; functions for protection of life and property; functions for mobilization and management of resources and production; and various supporting functions including Federal assistance to States and their political subdivisions. Other documents concerning civil defense and defense mobilization will be issued as necessary. Each will be subordinate to and compatible with the plan, which is designed to be flexible and adaptable to changes in international relations, techniques and material of warfare, and to other pertinent factors.

State and local governments are charged by the national plan with responsibilities for civil defense actions essential to national survival. For example, local government is responsible for maintenance of law and order. The Federal Government will assume and exercise local police functions only upon request of a State government or in the event State law-enforcement forces are unable to provide necessary support to local police. Further, the Secretary of Defense will provide emergency military aid to the civil authority requesting assistance in maintaining law and order, but only if it does not interfere with the conduct of primary military missions.

The Federal Government takes a larger share of responsibility in the area of defense mobilization, being charged by the national plan with stimulating the development and maintenance of resources needed to expand, maintain and restore essential production and distribution processes. Among other things, the Federal Government will contribute to the reduction of vulnerability of the national industrial plant through programs for physical protection, including dispersal; continuity of management; maintaining multiple sources of supply for mobilization requirements; and stimulating voluntary agreements to provide for combinations or exchanges of resources during an emergency.

Augmenting the national plan are the emergency mobilization regulations designed as standby authorities and controls for Federal departments and agencies to which OCDM has delegated civil defense and defense mobilization responsibilities. These regulations were first compiled in the Exercise Federal Register employed in Operation Alert 1959 and, like the national plan itself, will not remain static.

Conflicts resulting from the merger of the Office of Defense Mobilization and the Federal Civil Defense Administration into the Office of Civil and Defense Mobilization are resolved in favor of the national plan where possible or the plan is revised, according to OCDM.

In its annual report to the committee, OCDM stated that with the continuation of the preparations called for by the national plan, all State and local government employees should be much better prepared to execute their emergency governmental functions by July 1, 1960. OCDM noted that only those employees normally performing emergency-type operations, such as police and civil defense employees, are adequately prepared now.

Annexes to the national plan are reviewed and given clearance within the Federal Government and by representatives of State and local governments, as well as by special committees advisory to these governments, prior to distribution at all governmental levels. OCDM's annex status report of October 21, 1959, listed by numbers and titles, follows:

Printed and distributed:
1. Planning Basis.
2. Individual Action.
3. Organization for Civil Defense and Defense Mobilization.
4. Authorities for Civil Defense and Defense Mobilization.
7. Role of the Military.
8. Preparations for Continuity of Government.
10. National Shelter Plan.
17. Disaster Services.
36. Research and Development.
41. Summary of Annexes.

Being printed:
12. Directed Movement.
13. Warning.
16. Maintenance of Law and Order.
19. Emergency Welfare.
22. Explosive Ordnance Reconnaissance.
23. National Radiological Defense Plan.
24. National Biological and Chemical Warfare Defense Plan.
30. National Manpower Plan.
34. National Transportation Plan.
37. Training and Education.
39. Review, Tests, and Inspection.

Being revised after external review:
14. Damage Assessment.
18. National Health Plan.
28. Management of Emergency Production.
31. National Food Plan.
33. National Energy and Minerals Plan (in four parts).
35. Emergency Administration of Essential Facilities.

Under external review:
9. Public Information.
15. Communications.
21. National Fire Defense Plan.
25. Maintenance of Essential Resources.
32. National Water Plan.
38. Federal Assistance.
40. Natural Disasters.
42. National Emergency Housing Plan.

Awaiting Director's approval for external review:
11. Protection of Essential Facilities.

Being revised after internal review:
6. Federal Emergency Plans and Procedures.
27. Emergency Financial Controls.
29. Emergency Distribution and Consumption Controls.

Being drafted:
5. Federal Delegations and Assignments. (This annex will consist of the first nine OCDM delegations when they are approved.)

Discontinued:

20. Registration and Information. (Now part of No. 19.)
26. Protection and Continuity of National Industrial Plant. (Now part of No. 11.)

## Committee Publications

The complete list of your committee's printed reports is as follows:

*Hoarding and Strategic Materials: Hearing before the Joint Committee on Defense Production, December 20, 1950.

Regulation W—Automotive: Hearing on the effect of regulation W on automotive sales and financing, December 6, 7, 8, and 11, 1950.

Progress Report No. 1: Discussion of Defense Production Act, Eric Johnston and Michael DiSalle, February 9, 1951.

Progress Report No. 2: To hear Charles E. Wilson, Director of Defense Mobilization, February 8, 1951.

Progress Report No. 3: Wage Stabilization Board and Defense Production Administration, February 13, 1951.

*Progress Report No. 4: To hear Michael V. DiSalle, Director, Office of Price Stabilization, March 2, 1951.

Progress Report No. 5: Secretary Charles F. Brannan and Michael V. DiSalle on cotton controls, March 8, 1951.

Progress Report No. 6: Manly Fleischmann, Administrator, NPA, on tax amortization program, March 19, 1951.

*Progress Report No. 7: Charles E. Wilson, Director, Office of Defense Mobilization, on his April 1 report to the President; opinion on Government contracts by Robert L'Heureux, April 4, 1951.

Progress Report No. 8: William H. Harrison, Administrator, Defense Production Administration, tax amortization and certificates of necessity, April 12, 1951.

*Progress Report No. 9: Witnesses on the meat production and supply situation, June 13, 15, 1951.

Progress Report No. 10: Charles E. Wilson, Director, Office of Defense Mobilization; Manly Fleischmann, Administrator, Defense Production Administration; and Michael V. DiSalle, Director, Office of Price Stabilization, price regulations, allocations, and priorities, November 26 and 27, 1951.

*Progress Report No. 11 (S. Rept. No. 1061): Steel, copper, and aluminum allocations survey, January 15, 1952.

Progress Report No. 12: Gordon Dean, Chairman, and others from the Atomic Energy Commission, discussion of Savannah River project, November 27, 1951.

Progress Report No. 13 (S. Rept. No. 1107): Machine tools, January 23, 1952.

Progress Report No. 14 (S. Rept. No. 1310): World supply, United State production, consumption, imports, and exports of steel, copper, and aluminum, and domestic requirements and allocations, March 17, 1952.

*Progress Report No. 15 (S. Rept. No. 1062): Electric power study, January 15, 1952.

*Progress Report No. 16: Charles E. Wilson, Director, Office of Defense Mobilization, and Manly Fleischmann, Administrator, Defense Production Administration, on second quarter 1952 allocations, January 9, 1952.

Progress Report No. 17: Charles Sawyer, Secretary of Commerce; Thomas H. MacDonald, Commissioner, Bureau of Public Roads; and Vice Adm. Edward Cochrane, Administrator, Maritime Commission, on second quarter 1952 allocations, January 15, 1952.

Progress Report No. 18: Arthur S. Flemming, Assistant to the Director—Manpower, and Rodolfo A. Correa, General Counsel, Office of Defense Mobilization, on procurement in labor-surplus areas, February 6, 1952.

Progress Report No. 19: Various witnesses on the Canadian aluminum proposals, May 26 and June 2, 1952.

Progress Report No. 20 (S. Rept. No. 1987): Aluminum program, June 30, 1952.

Progress Report No. 21: Henry H. Fowler, Director, Office of Defense Mobilization, on current and future defense activities, October 1, 1952.

Progress Report No. 22 (S. Rept. No. 2): A study of consumer commodity prices and margin spreads, October 22, 1952.

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*Supply exhausted; no longer available.

Progress Report No. 23: Hearing on price control and OPS activities, November 19, 1952.
Progress Report No. 24 (H. Rept. No. 1): Aluminum expansion program and competition, January 2, 1953.
Progress Report No. 25 (S. Rept. No. 154): Review of tax amortization program, April 20, 1953.
Progress Report No. 26: Hearing, ODM, Munitions Board, and GSA on Defense Manpower Policy No. 4, May 4, 1953.
Progress Report No. 27: Witnesses from Government agencies on proportion of Government contracts awarded to small-business concerns, March 8, 1954.
Progress Report No. 28: Witnesses in the matter of loans to the United States Tin Corp. under the Defense Production Act, July 7, 8, 9, 12, 13, 14, 20, 21, 23, 26, 28, and 29, 1954.
Progress Report No. 29 (H. Rept. No. 2): United States Tin Corp. loans.
Progress Report No. 30: Dr. Arthur S. Flemming, Director, Office of Defense Mobilization, on progress of defense mobilization program, April 15, 1955.
Progress Report No. 31: To hear witnesses on the activities of the Interior Department under the Defense Production Act, June 9, 1955.
Progress Report No. 32: To hear witnesses on Defense Production Act contracts entered into by the Defense Materials Procurement Agency, July 6, 14, 27, 1955.
Progress Report No. 33: To hear Edmund F. Mansure, Administrator, General Services Administration, August 3, 1955.
Progress Report No. 34: To hear Dr. Arthur S. Flemming, Director of the Office of Defense Mobilization, on defense mobilization programs, April 11, 1956.
Progress Report No. 35: To hear True D. Morse, Under Secretary of Agriculture, and Spencer S. Shannon, Director of the Office of Minerals Mobilization, Department of the Interior, on defense mobilization programs, April 16, 1956.
Progress Report No. 36: Study of supply and distribution of nickel, January 8, 1957.
Progress Report No. 37: Supplementary report to study of supply and distribution of nickel by the Secretary of Commerce, February 21, 1957.
Progress Report No. 38: To hear Franklin G. Floete, Administrator of the General Services Administration, on the activities of GSA under the Defense Production Act, May 21, 1957.
Progress Report No. 39: To hear the Director of the Office of Defense Mobilization and the Administrator of GSA on activities under the Defense Production Act, including loans and guaranteed loans, May 28, 1957.
Progress Report No. 40: Report on reducing our vulnerability to attack, June 4, 1957.
Progress Report No. 41: To hear the Director of the Office of Defense Mobilization and the Administrator of GSA on activities under the Defense Production Act, including aluminum contracts and tax amortization, July 30, 1957.
Progress Report No. 42: To discuss the adequacy of preparedness programs to meet nuclear attack and limited-scale war; to hear the Director of the Office of Defense and Civilian Mobilization and representatives of the Department of Commerce and the Department of Agriculture, July 10, 1958.
Progress Report No. 43: Reports submitted by the Director of the Office of Civil and Defense Mobilization on recommendations in the 8th Annual Report of the Joint Committee on Defense Production, June 24, 1959.
Progress Report No. 44: Mobilization programs of Office of Civil and Defense Mobilization and Business and Defense Services Administration, August 18, 1959.
*First Annual Report of the Activities of the Joint Committee on Defense Production, 1951.
*Second Annual Report of the Activities of the Joint Committee on Defense Production, 1952.
Third Annual Report of the Activities of the Joint Committee on Defense Production, 1953.
Fourth Annual Report of the Activities of the Joint Committee on Defense Production, 1954.
Fifth Annual Report of the Activities of the Joint Committee on Defense Production, 1955.
Sixth Annual Report of the Activities of the Joint Committee on Defense Production, 1956.

*Supply exhausted; no longer available.

**Seventh Annual Report of the Activities of the Joint Committee on Defense Production, 1957.**
**Eighth Annual Report of the Activities of the Joint Committee on Defense Production, 1958.**

## Activities of Departments and Agencies Having Functions Under the Defense Production Act

All Federal departments and agencies performing functions under the Defense Production Act, as amended, were requested to submit reports of their activities during the past year for inclusion in this report. These have been included in the appendix.

Also included in the appendix are the Defense Production Act of 1950, as amended, and Executive orders issued under authority of the act.

# APPENDIX

## OFFICE OF CIVIL AND DEFENSE MOBILIZATION

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF CIVIL AND DEFENSE MOBILIZATION,
*Washington, D.C., November 24, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Washington, D.C.*
(Attention: Mr. Harold J. Warren, clerk and counsel.)

DEAR MR. CHAIRMAN: I am pleased to submit to your committee the annual report of the Office of Civil and Defense Mobilization.

Sincerely,

LEO A. HOEGH.

Enclosure.

### DIRECTOR'S SUMMARY

The creation of the Office of Civil and Defense Mobilization (OCDM) [1] in the Executive Office of the President gave the Nation a firm organizational base at the national level for building a unified nonmilitary defense program. The unified Federal direction and guidance stemming from this action increased the stature, strength, and effectiveness of nonmilitary defense. But the Nation has only begun to realize the true magnitude of the change. It will continue to pay multiple dividends in improved operations in the future.

The national plan for civil defense and defense mobilization, promulgated by the President in October 1958, establishes national nonmilitary courses of action and the role of the Federal Government, the States, their political subdivisions, and the people to deter aggression and, in the event of aggression, to enable the Nation to survive, recover, and win. The plan is a statement of principles, responsibilities, requirements, and broad courses of action, supported and amplified by annexes.

The plan and its annexes are widely distributed to all levels of government after clearance within the Federal Government and by representatives of State and city governments, as well as by special committees advisory to these governments. While other documents concerning civil defense and defense mobilization will be issued as necessary, each will be subordinate to and compatible with the national plan.

Accomplishments in implementing the national shelter policy announced on May 7, 1958, included:

1. A vigorous program to inform all persons of fallout danger and steps they and their governments can take to minimize it.
2. Pilot fallout shelter surveys almost completed in Tulsa, Okla.; Montgomery, Ala.; Milwaukee, Wis.; and Contra Costa County, Calif. Plans were underway for similar surveys in New York City, N.Y.; Los Angeles, Calif.; Tallahassee, Fla.; and the State of Delaware.
3. Accelerated research on shelter design and radiological defense. Shelter design studies were well advanced.
4. Plans for constructing approximately 100 prototype fallout shelters.
5. A directive to all Federal departments and agencies requiring them to include fallout shelter design and construction costs in their budget estimates for appropriate new Federal buildings, beginning with fiscal year 1960.

[1] Established under Reorganization Plan No. 1 of 1958, implemented through Executive Order 10773, and designated by its present title by Executive Order 10782.



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The Federal Government continued to strengthen the State and local civil defense and mobilization activities through the Federal matching funds and the Federal surplus property programs. Although Public Law 85–606 permits Federal contributions to the States for civil defense personnel and administrative expenses, a lack of appropriations precluded the use of this means of strengthening local capabilities.

The continuity of government program continued to advance substantially on all fronts:

1. Federal emergency lines of succession have been established generally. Thirty-four States have enacted laws pertaining to the continuity of government.

2. Programs for the preservation of essential records are well advanced in the Federal relocation arc. State and local governments are expected to have reasonably adequate preservation of records programs by July 1, 1962.

3. The development of emergency operating sites in a relocation arc near Washington, D.C., is well underway. Plans were approved for establishing well-protected operational centers for all OCDM regional offices, and $2.4 million was appropriated for constructing the first underground center at Denton, Tex. Five of the fifty States have protected control centers for their executive branches. The remaining States have designated unprotected control centers, and 19 of them should be protected by July 1, 1962; the balance by July 1, 1967, if sufficient Federal matching funds are made available.

4. Federal agencies were designating employees to perform their headquarters' emergency functions. With the continuation of preparations specified in the national plan, State and local government employees should be much better prepared to carry out their emergency functions by July 1, 1960.

The radiological defense system was strengthened throughout the Nation. Important accomplishments included:

1. Accelerated distribution of radiological instruments to States, territories, high schools, and Federal agencies.

2. The establishment of an expanding Federal network of radiological monitoring stations augmented by State and local stations eventually to total 150,000.

3. Accelerated training. Trained radiological defense instructors available to State and local governments totaled approximately 16,000, and radiological monitors totaled about 156,000 at the end of fiscal year 1959.

In addition to operating the Staff College and the Radiological Defense School at Battle Creek, Mich., and the Eastern Instructor Training Center at Brooklyn, N.Y., OCDM will begin operation of a Western Instructor Training Center in fiscal year 1960. Approximately 7,600 radiological instrument kits have been given to high schools and colleges, and about 1 million students have received some education in their use. OCDM has an agreement with the U.S. Office of Education to develop an expanding adult education program in the States to emphasize the national shelter policy and the self-help aspects of the national plan.

To inform very person of essential survival measures and to help governments at all levels to achieve this objective, OCDM used a variety of public information media available and within its means. Notable examples were:

1. The use of motion pictures, national television and radio networks, special news releases, and magazine articles.

2. The dissemination of information on radioactive fallout by means of billboards, posters, exhibits at major public gatherings, and official publications.

3. Major briefings and conferences with audiences totaling 55,000 key Government and organization leaders.

4. A 30-minute test of the Control of Electromagnetic Radiation (CONELRAD) system in Operation Alert 1959. All commercial broadcasting and telecasting in the United States stopped for the first time in daylight hours while designated AM radio stations returned to the air on CONELRAD frequencies, 640 and 1240, to broadcast civil defense instructions.

Major accomplishments in preparing for the emergency management and mobilization of resources and production included:

1. Development of emergency measures for restoration, continued functioning, and stabilization of our monetary and economic system in the relatively undamaged areas of the country following massive attack.
2. Plans for establishment of emergency transport and communications agencies to function under mobilization conditions and partial recruitment of executive reservists to staff the agencies.
3. Continuous review and revision of mobilization plans and refinements of supply-requirement studies to meet changing conditions.

## I. Protection of Life and Property

### A. Continuity of Government

Our survival as a Nation depends upon the ability of the Federal, State, and local governments to carry out their responsibilities in the event of a massive attack. To make this possible, the continuity of Government program is aimed at establishing lines of succession for key officials and personnel; preserving essential records; developing protected locations for Government operations; and making full use of all personnel, facilities, and equipment of Government at all levels.

*1. Lines of succession*

Emergency lines of succession have been generally established in the Executive branch of the Federal Government. Legislation to deal with this problem is being considered in 46 States this year; to date 34 have enacted laws pertaining to continuity of Government. All States are expected to have some lines of succession by July 1, 1960. Work is underway with the counties and cities with population over 50,000 to get them to adopt lines of succession. A survey of progress will be made this year.

*2. Preservation of records*

Programs for the preservation of essential records are well advanced in the Federal relocation arc; and Federal agencies will report December 30, 1959, on their progress in extending this program to their field establishments. Many States have taken some preliminary actions to plan the preservation of their records, but none has an adequate record preservation program in operation. Many States are expected to take initial steps by July 1, 1960, and to have reasonably adequate programs in effect by July 1, 1962. The outlook for local governments is similar.

*3. Relocation sites*

The development of emergency operating sites for the Executive branch in a relocation arc near Washington, D.C., is well underway.

At the regional level, plans have been approved for the establishment of underground control centers at the eight OCDM regional offices. Each control center will have the capability for operation in an emergency as the headquarters for all Federal nonmilitary activity within the region. Two or more representatives from the key agencies with emergency functions are slated for permanent assignment to the control centers, and they would be augmented by additional personnel in an emergency. These representatives will be technically competent and have delegated authority to act for their agencies in an emergency if they cannot contact their superiors. To the extent possible, these assignments will be permanent, although temporary duty assignments may be made for periods of 30 days or more.

The centers will be designed to provide protection from fallout and a minimum of 30 pounds per square inch overpressure blast protection, with an effective filter system for radiation, chemical and biological hazards. The centers will be interconnected with an adequate communications system. Funds for the first underground center at Denton, Tex. ($2.4 million) have been appropriated. Funds for further construction will be requested in future budgets.

More than 30 States will require legislation to permit the legal transfer of their seats of government. Fifteen States have passed such legislation. It is anticipated that this legislation, usually involving constitutional amendments, will have been adopted by most of the remainder by July 1, 1963.

Five of the 50 States have already established control centers for their executive branches. The other States have designated unprotected centers for government.

Many of the cities and counties have established control centers. The number of adequately protected centers is small but increasing. Those centers with some protective features include Portland, Oreg.; Dade County, Fla.; DuPage County, Ill.; Oakland, South Pasadena, and Glendale, Calif. Cities and counties are expected to use all the Federal matching funds available in fiscal year 1960 in excess of those used by the States.

*4. Use of Government personnel, facilities, and equipment*

The role of every department and agency of the Federal Government in carrying out the national plan has been determined. Some agencies and departments are scheduled to receive Executive orders assigning them emergency missions, and others wil receive a statement from OCDM outlining their emergency functions. The statement will be in the form of an agreement for accelerating, modifying, or temporarily suspending normal functions during emergencies. Organizational units whose functions are to be temporarily suspended will provide personnel for carrying out emergency functions of other agencies or of emergency agencies required for stabilization, transportation, and communications controls.

For fiscal year 1960, OCDM requested $12 million and received $6¼ million for financing preparedness acitvities of other Federal agencies. This is the first time that all of these activities have been financed under a single appropriation.

State and local government personnel, with the exception of those persons normally performing emergency type operations, such as police and firemen, are not adequately prepared to execute their emergency government functions. With the continuation of the preparations called for by the national plan, all State and local government employees should, by July 1, 1960, be much better prepared to execute their emergency governmental functions.

### B. REDUCTION OF VULNERABILITY

OCDM's program for reducing our national vulnerability involves individual or family actions, actions by industry, and actions by Government. A balanced program must include shelters and protective devices, hardening and dispersal of facilities, controlled movement of people and materials, and adequate stockpiles of essential survival items. Controlled movement is discussed under section I–G while survival items are discussed under section II–A.

*1. National shelter policy*

A little more than a year has passed since the national shelter policy was announced on May 7, 1958, urging that the property owner provide fallout protection on his premises. During this period, public awareness of and interest in the problem has increased substantially. Governor Rockefeller's call for a compulsory shelter program in New York State, followed by the endorsement of shelter programs by the Conference of Governors meeting in Puerto Rico, has given a strong boost to the program. Many widely read publications have commented editorially on these actions, pro and con. Several organizations have offered to sponsor construction of prototype shelters. As a result of this growing concern, it is reasonable to assume that shelter-construction activities in the coming year, and succeeding years, will be accelerated.

In addition to its public information activities, OCDM has taken a number of actions to advance our knowledge of shelter availability and design. Pilot surveys are underway in Milwaukee, Wis.; Tulsa, Okla.; Montgomery, Ala.; and Contra Costa County, Calif., to identify and evaluate the potential fallout shelter in existing buildings. Pertinent questions are to be included in the 1960 national census, and, subsequently, in the monthly current population survey, which will give us an approximate measure of existing home shelter throughout the United States.

In December 1958, five Federal office buildings in Washington, D.C., were surveyed to determine what sort of shelter they provided or could provide with modest improvements. The survey showed that all had potential shelter areas which were more than adequate in size for their regular workforce and that they could be improved and equipped to provide extended occupancy and excellent fallout protection.

Shelter design studies are well advanced. Plans are now being widely distributed for a simple do-it-yourself home basement shelter made of solid concrete blocks, as well as other types for outdoor use above and below ground.

During fiscal year 1960 nearly 100 prototype shelters will be constructed or initiated. These are expected to stimulate interest among persons who visit them in addition to providing technical data. Special attention is being devoted to multiple use types.

All Federal departments and agencies have been directed to include funds for fallout shelter in budget estimates for new buildings. Funds were appropriated for fiscal year 1960 to provide shelter for one building project. Sixteen Federal agencies have reported that they have construction projects planned for fiscal year 1961 which may be suitable for inclusion of fallout shelter.

The Congress appropriated $4 million for research and development in fiscal year 1960. OCDM plans to spend $2.5 million of this appropriation for construction of prototype shelters.

Some progress has been made in making fallout shelter financing easier but there remain roadblocks in lack of adequate financial incentives and easy-financing arrangements. Federal Housing Administration will guarantee property improvement loans up to $3,500 for the construction of shelters. However, these do not apply to new construction. FHA has not yet been able to establish market values for shelters in assessing value for purposes of loan guarantees on new construction. Also shelter construction may be handicapped in some areas by the fact that this adds to the value of the property and hence to the real estate tax. OCDM will urge State and local governments to make the necessary changes in their laws to remove this possible hindrance.

*2. Reduction of vulnerability of Federal facilities*

Aside from the emergency relocation program discussed above, very limited progress was made during the past year in reducing the vulnerability of Federal facilities.

A selective approach to dispersion and protective construction which recognizes various degrees of target vulnerability and couples them with various degrees of acceptable risk, depending upon the criticality of the facility, is now being studied. The recent development of a study of standardized survival probabilities for the most important locations in the United States (see section I–D) provides a useful tool for this purpose.

Industrial dispersion is discussed in section II–A.

### C. WARNING OF ATTACK

At the present time, a warning time of 3 hours is still regarded as the maximum probable time in most areas. With the further development of intercontinental ballistic missiles, the tactical warning will be reduced to zero to 15 minutes. Nevertheless, our civil defense plans and our individual responses must be sufficiently flexible so that we can take the best advantage of whatever amount of warning is available.

The national warning system (NAWAS) now consists of 6 OCDM warning centers at major Air Force installations, 49 State warning points (including Washington, D.C.), and 227 other warning points. The network is capable of sending a warning to all 276 warning points in about 15 seconds. Warning points will be increased to 376 in fiscal year 1960 and 500 in fiscal year 1961.

The States are capable of relaying warnings to approximately 5,000 local warning points. Fifty-two percent of cities in target areas have adequate outdoor public warning systems (primarily sirens). This includes Washington, D.C. The remaining target areas will be encouraged to develop and install adequate warning systems under the contributions program.

Tests have shown that outdoor warning systems are relatively ineffective for people who are indoors. A method for indoor warnings has been developed and tested. The national emergency alarm repeater (NEAR) system will require the installation of 400 to 600 signal generators on powerlines throughout the United States. Simple plug-in alarms will be used in homes and offices to receive the signal. Cost of the generating equipment, $30 million; cost of the alarms, about $5 each. Effort is being made to have this system financed by private industry and individuals.

### D. DAMAGE ASSESSMENT

National coordination and control, and national decisions, after an attack must be based on rapid assessment of the damage and casualties and of the resources which remain for recovery. A national system, using a high speed electronic computer, is in operation at the National Damage Assessment Center

(NDAC) at a secure location. Fourteen agencies participate in its work. A file of data on 75 resource categories at 250,000 locations is maintained and constantly updated.

In addition, OCDM has developed a series of manual techniques for assessing damage at National, regional, State, and local levels. It has also developed and provided procedures for National, regional, and State systems using a medium speed computer.

OCDM is providing the NDAC additional protection against attack to improve its postattack capability. Plans are underway for a special communication system connecting it to key Government command centers.

OCDM headquarters and regional offices also have a capability for manual damage assessment. An undetermined number of States have some capability but not all the State systems can be integrated with the OCDM system. An integrated hand system will be developed.

### E. COMMUNICATIONS

The national plan states that the Federal Government will maintain a reasonably secure system of communications among the Federal agencies and to the States; the States will do the same with respect to their jurisdictions; and local governments will maintain communications for their emergency operations.

OCDM's primary system of operational communications is national communications system No. 1 (NACOM 1). It consists of about 22,000 miles of leased wire facilities—private line telephone and teletypewriter services—connecting OCDM's relocation site with Battle Creek, the regional offices, State civil defense offices, and Canada. Currently requiring about 30 minutes to activate, it will be converted to fulltime use during fiscal year 1960. Automatic cryptographic equipment will be provided during fiscal year 1961.

Initial equipment has been procured for a system of radio backup called NACOM 2. The OCDM installation and tie-ins to approximately one-half the States are to be completed during fiscal year 1961; the remainder in fiscal year 1962.

The interagency communication system, which connects the relocation sites in the Federal arc, will be developed to achieve a reasonable degree of protection against attack during fiscal year 1961.

Many agencies have communications systems to their field offices. Some of these are Government-owned and some are leased lines. Surveys are underway to determine to what extent these various systems can and should be interconnected.

At the State and local level, the radio amateur civil emergency services (RACES) program has continued to expand. Over 30,000 operators in over 1,100 State and local organizations participate.

### F. MAINTENANCE OF LAW AND ORDER

Local government is the basic entity responsible for the emergency maintenance of law and order. The national plan calls for State law enforcement forces to support local police as necessary. Only upon the request of a State government, or in the event a State government is unable to act, will the Federal Government assume and exercise necessary functions for local maintenance of order. Upon request, the Secretary of Defense will provide emergency military aid to the civil authority to assist in maintaining law and order, provided it does not interfere with the conduct of primary military missions.

One of the major purposes of the State and local continuity of government program is to assure that these governments do, in fact, retain the capability to preserve law and order. This function is also an important part of the State and local operational plans and the OCDM police services program.

### G. SURVIVAL PREPARATIONS AND DISASTER SERVICES

Operational plans (under the survival projects program) have been developed in 48 States and the District of Columbia. In addition 240 area plans and 2,215 local plans have been developed. By June 30, 1960, substantial progress will have been made in refining and improving these plans, in extending the planning to include additional localities and in providing, through OCDM regional offices, for integrated, interstate emergency actions and procedures.

Disaster services include casualty care and emergency public health, emergency welfare services, rescue, debris clearance, fire protection, and decontamination.

The national plan and its annexes prescribe responsibilities for disaster services and the State and local operational plans implement them. Private organizations, such as the Associated General Contractors and the American Legion, have developed plans to assist in disaster services

Because of the magnitude of modern thermonuclear weapons and the problem of fallout, the principal theater of disaster services will be in zones of tolerable radiation intensities—zones which will become progressively larger as radioactivity decays. Rescue, debris clearance, and firefighting will be limited in initial disaster operations because of the excessive radioactivity in the blast and fire-affected areas. Instead, the emphasis will be on emergency health care and welfare services in the areas of tolerable radiation intensities.

*1. Emergency health care*

Because of the extreme shortage of health resources that would be experienced in an emergency attack, our traditional concepts of health and medical care for the surviving population have had to be revised. It is necessary to stress preparations for maintaining health as well as care of the sick and injured. The application of strict medical care priorities is considered inappropriate as a tool for the management of health resources but it is a useful guide for professional personnel in the sorting of patients for appropriate treatment methods. This is the most practical way to make the best use of health resources and can be achieved only with extensive preattack training and education of professional health personnel. OCDM, in cooperation with DHEW, will provide guidance to State and local governments in the optimum use of existing resources in a disaster situation. Only group, family, and individual self-help will be available to those persons isolated from professional health services by effects of an attack.

Existing plans to mobilize and utilize health resources are not yet adequate to take full advantage of the limited resources that will be available following an attack on the United States. State survival plans are quite uneven in their health content because of the uneven health planning resources in the several States. The Public Health Service, under procedures now being established, will develop national emergency plans and a comprehensive preparedness program.

The civil defense stockpile contains about $200 million of essential health supplies. The stockpile includes 1,932 civil defense emergency hospitals, of which nearly 1,300 units have been prepositioned at local strategic sites ready for immediate use.

One of the limiting health resources—which cannot be stockpiled—is manpower. OCDM has contributed funds to the MEND (medical education for national defense) program which introduces mass emergency medical care training into the curriculum of the Nation's medical schools. DHEW will institute specialty courses for the ancillary health professions and will work with representative national organizations and respective schools to develop training programs in the pregraduate period similar to the MEND program. DHEW is also studying what measures of self help can be taught to members of the general public to give them a capability of lifesaving medical care in the event of massive enemy attack.

*2. Emergency welfare services*

Emergency welfare services embrace all the service and assistance required to meet human needs for food, clothing, and lodging; to furnish information on the condition and whereabouts of persons; and to register persons in attacked areas for use in reuniting families separated during evacuation.

OCDM, in cooperation with the Departments of Health, Education, and Welfare; Agriculture; Interior; and Post Office, and the Housing and Home Finance Agency, and numerous professional, social welfare, and business organizations, is developing plans to provide emergency welfare care for people. While the responsibility for distributing existing supplies of food and water to the population is a State and local one, plans are being developed to make use of the 3,000 Department of Agriculture local offices to assist State and local governments.

In the housing field, detailed procedures, billeting standards, and arrangements for adding to the supply have not yet been worked out. The Housing and Home Finance Agency, under delegation from OCDM, has begun the development of a national plan for housing, which will augment local civil defense plans.

### H. RADIOLOGICAL DEFENSE

The national plan assigns responsibilities for protection against clandestine and unexploded ordnance, chemical and biological warfare agents, and radiation. The latter is receiving priority attention.

The number of radiological instruments distributed to States and territories for radiological defense training and operational preparedness has grown substantially. More than 155,000 instruments have been distributed to the States, territories, and high schools. An additional 66,000 instruments were loaned or transferred to 21 Federal agencies to improve the operational readiness of the Federal Government. These quantities represent only a small first step toward the number of instruments required to provide adequate radiological defense.

A program has been started to establish a Federal network of radiological monitoring stations to provide hourly reports on the level of fallout radiation across the Nation after a nuclear attack. Approximately 1,000 radiological monitoring stations have been established at fixed field facilities of the U.S. Weather Bureau, the Federal Aviation Agency, the Air Weather Service of the U.S. Air Force, the Department of Agriculture, and the Department of the Interior. OCDM plans to expand this Federal portion of the network to 1,800 by the end of fiscal year 1960, 2,400 by the end of fiscal year 1961, and 3,043—or one in each county—by the end of fiscal year 1962. In addition, an estimated 14,000 State and local monitoring stations are now in operation, against a long-term goal of 150,000 for Federal, State, and local governments by 1963.

As the result of training programs across the Nation, approximately 16,000 instructors in radiological monitoring and 156,000 radiological monitors are available to State and local governments. In addition, approximately 1 million students have received some education in the use of the 7,600 instrument kits which have been given to high schools and colleges. An additional 7,400 kits will be supplied to high schools and colleges in fiscal year 1960.

## II. Mobilization and Management of Resources and Production

Mobilization and management of resources and production is the second major indispensable mission of civil defense and defense mobilization. Programs for the protection of life and property—the other principal task dealt with by the national plan—will not make maximum contribution to the survival of the Nation unless resources are available and effectively used.

Activities to accomplish the resources and production mission are of two major categories: Programs for the development of adequate supplies of essential resources and their maintenance at locations where they will be available in an emergency, including the determination of supply and requirements and the identification and correction of deficiencies; and programs for the revival of production and the development of a management capability at Federal, State, and local levels which will assure the effective use of available resources in an emergency.

### A. DEVELOPMENT AND MAINTENANCE OF ESSENTIAL RESOURCES

As set forth in the national plan, the Federal Government is charged with stimulating the development and maintenance of resources necessary for expanding, maintaining, or restoring essential production and distribution processes.

*1. State, local, and private inventories*

The national plan urges individuals to be prepared to exist on personal stocks of survival items in their homes and shelter areas for 2 weeks following attack. It urges State and local governments to have available emergency supplies and equipment sufficient for 4 weeks following attack.

Most households do not now have enough food to last for 2 weeks. Similarly, State and local inventories of survival items and civil defense equipment are small, although some start has been made through Federal contributions, as discussed elsewhere in this report.

One major product of the survival projects program has been the development, at State and target area level, of considerable useful information on resource availability. OCDM will assist States in the further development of such data, including translation of the information into forms permitting interstate, regional, and national compilations of probable surpluses and shortages.

*2. Federal stockpiles*

The Federal Government maintains many stockpiles of importance to civil and defense mobilization. These include strategic and critical materials inventories, survival item inventories, and machine tools inventories.

*Strategic and critical materials.*—On June 30, 1959, the Federal Government had supplies of 75 strategic and critical materials meeting stockpile specifications valued at $5.8 billion in the national stockpile; $574 million in the supplemental stockpile; $705 million in Defense Production Act inventories; and $87 million in Commodity Credit Corporation inventories obtained through barter of agricultural surpluses.

A new stockpiling policy calls for the establishment of objectives on the basis of the time required for supplies of materials in a national emergency to match essential needs of the emergency, including emergency reconstruction after nuclear attack. Pending the determination of these requirements, the maximum planning period will be limited to 3 years.

Open market purchases for the strategic stockpile are largely completed. Only chrysotile asbestos, diamond dies, and jewel bearings are programed for purchase on the open market. A total of approximately $6.5 million is available for this purchase in fiscal year 1960. Chrysotile asbestos will be procured so far as available from domestic sources. Diamond dies and jewel bearings are being purchased at minimum rates necessary to maintain the domestic production base.

Under the Public Law 480 barter program, acquisition values of materials acquired were $1,071 million committed as of June 30 for strategic materials, $615 million transferred to the supplemental stockpile, and $223 million transferred to the strategic stockpile. There are no limits to the supplemental stockpile, but procurement is expected to taper off as inventories are accumulated. Legislation is being drafted to authorize nonreimbursable transfers of material to meet strategic stockpile objectives.

Upgrading of copper, molybdenum, vanadium, and tungsten in the strategic stockpile is underway to provide readiness inventories of the more usable forms. The upgrading of tantolite has been authorized and precise specifications for this purpose are being developed.

Disposal actions, in accordance with the legal requirements that such actions shall not cause serious economic disruptions in the market, have been limited until recent months because of adverse economic conditions. In addition, congressional approval is required for disposal of any nonobsolescent materials from the strategic stockpile. So far, Congress has approved proposals for the disposal of gem diamonds, 3 platinum items, and zircon, but has not approved the disposal of extra long-staple cotton beyond 50,000 bales.

*Survival items.*—The existing civil defense stockpile, valued at approximately $200 million, involves primarily medical items. It was planned in early 1952 to meet an attack by low-yield atomic weapons, and a probable need to take care of 5 million casualties for 21 days. The stockpile has reached only about 50 percent of this original and now inadequate goal.

Health and sanitation supplies generally represent the most critical survival items. An appraisal of stockpile requirements was completed in 1958 and is now being reevaluated on the basis of new production and resource estimates. The objective is to develop a sound and financial feasibility procurement program.

Postattack requirements factors for survival and recuperation will be developed during fiscal year 1960–61 for all other essential survival items. Data collection on supplies will be extended from medical survival items to all other essential items.

The Commodity Credit Corporation currently has on hand agricultural commodities accumulated under price-support legislation valued at $6.5 billion. These stocks are reasonably well dispersed. Under a policy adopted by the Commodity Credit Corporation in 1956, and concurred in by both ODM and FCDA, whenever CCC stocks are to be moved or an initial location for storage of stocks is being selected, defense criteria shall be applied wherever practical in selecting sites which are away from critical target areas and which would be accessible for use of the stocks in the event of attack, keeping in mind emergency transportation problems. In addition, substantial stocks of many foods are maintained in commercial inventories.

Attack damage studies indicate that these food stocks are ample in the aggregate, but that the problem of distributing them would be formidable. While, statistically, foodstuffs and food facilities would probably be in adequate supply

after an attack, if it does follow that sufficient edible food would be available at the time, in the places, and in the quantities necessary to meet the needs of the surviving population. The national food plan annex to the national plan (now in preparation) provides guidance to meet these needs in the immediate postattack period.

*Machine tools.*—The Federal Government owns about 300,000 machine tools, valued at $3 billion. The military departments own approximately 270,000 of these tools of which about 4,000 are in the national industrial equipment reserve (NIER), in GSA custody. To assure the availability of these tools for defense use, OCDM approval is required for their disposal or use for nondefense purposes.

Plans are in progress for the substantial enlargement of the NIER over a 3-year period and for the channeling of many more tools to schools through the surplus property donation program of the Department of Health, Education, and Welfare. In addition, a pilot operation is being initiated under which a complete complement of tools is to be lent from the NIER to a State industrial training center. If this experiment proves successful, it is planned to lend NIER tools to other similar training centers.

*3. Preallocation of contracts*

Since 1948 the Defense Department has had a production allocation program, under which tentative mobilization production schedules for military items are planned with specific manufacturers. Approximately 17,000 industrial plants have been registered for participation in the program for planned production of a variety of important military items.

OCDM has also developed a pool order program under which 90 percent of general-purpose machine tool producers have contracted with GSA to begin production on 15,000 such items on receipt of notice and to provide for full production of the machine tools industry for the first 6 months of an emergency. Notices will be sent only if the situation clearly indicates a need for the tools.

Work is being carried on with Business and Defense Services Administration and the Department of Defense to study the practicality of using the armed services procurement planning officers to assist in planning the use of, or conversion of, surviving plants to produce servival items.

*4. Development of substitutes for imported materials*

It is estimated that about $90 million of contracts under Defense Production Act borrowing authority has dealt with research and development, including approximately $35 million for minerals exploration. The contracts are concerned, at least in part, with domestic substitutes for imported materials which might not be available in wartime. Examples of these are the successful development of large-scale production of castor beans and extra-long-staple cotton, and the current efforts to develop synthetic mica.

*5. Development of new domestic sources for essential minerals*

On August 21, 1958, the President signed Public Law 85–701, authorizing and directing the Secretary of the Interior to provide a program for discovery of additional domestic mineral reserves, to establish and maintain a program of minerals exploration by private industry, and to provide Federal financial assistance on a participating basis for that purpose. This program, formerly the responsibility of the Defense Minerals Exploration Administration, is now being carried out by the Office of Minerals Exploration in the Department of the Interior.

*6. Expansion of productive capacity*

Expansion of the production component of the mobilization base has been encouraged in the past by accelerated amortization for tax purposes, loans and loan guarantees, and purchases and commitments to purchase.

During the past year $95 million in defense expansion were certified, of which $58 million of the costs were eligible for accelerated amortization. The authority to issue new certificates of necessity will expire on December 31, 1959.

One loan guarantee under section 302 of the Defense Production Act was made during the past year, in the amount of $850,000. No new authorizations were made under the Defense Production Act borrowing authority. Decreased demand for strategic materials by industry resulted in larger than expected deliveries to the Government in calendar year 1958 under previous contractor-option contracts, but since then the trend has been reversed.

*7. National security investigations of imports*

Section 8 of the Trade Agreements Extension Act of 1958 (Public Law 85–686) continues the authority formerly in section 7 of the 1955 Extension Act, providing a means for determining the extent to which imports may be threatening to impair the national security. The OCDM Director is charged with investigating allegations that imports of an article are entering the United States in such quantities and under such circumstances as to threaten to impair the national security and to advise the President if, as a result of such investigation, he is of the opinion such a threat to the national security exists.

Through June 30, 1959, applications for investigations under section 8 (Public Law 85–686) had been filed with respect to imports of cobalt, tungsten, fluorspar, wool knit gloves, crude oil and products, and steam turbine generator sets. In addition, the investigations of imports of dental burrs and heavy electrical power equipment, which had been started under section 7 of the 1955 Extension Act, were carried over to be completed under section 8 (Public Law 85–686).

On February 27, 1959, the OCDM Director advised the President that imports of crude oil and products were threatening to impair the national security. Subsequently, the President issued Proclamation No. 3279, dated March 10, 1959, which placed in effect a mandatory oil import program to be administered by the Department of the Interior. This mandatory program superseded the voluntary oil import limitation program which had been in effect earlier as a result of action taken under section 7 of the 1955 Extension Act.

On June 12, 1959, the OCDM Director announced his opinion that imports of heavy electric power equipment were not threatening to impair the national security. However, he indicated his intention to maintain a continuing study of hydraulic turbine developments.

The other pending cases are being studied.

*8. Protection of the national industrial plant*

The national plan states that the Federal Government will contribute to the reduction of vulnerability of the national industrial plant through programs for physical protection, including dispersal; continuity of management; maintaining multiple sources of supply for mobilization requirements; and stimulating voluntary agreements to provide for combinations or exchanges of resources during emergency.

Defense Mobilization Order I–19, setting forth the Government's policy regarding industrial dispersion, is still in effect. Since the accelerated amortization program is soon to end, this incentive for dispersion will not be available.

The continuity of industry program carried out by the Department of Commerce through its industrial defense staff was abolished in 1957 as a result of drastic appropriation reductions. The Department of Defense has continued its activities in connection with the industries on its key facilities list. OCDM is continuing its industrial survival training courses through its Staff College, field conferences, and publications.

In connection with its nonmilitary defense operations research, the Stanford Research Institute is assisting in identification of the most critical industries in terms of attack damage analysis and ease of substitution or rehabilitation.

### B. PREPARATIONS FOR RESOURCE MOBILIZATION AND MANAGEMENT

The national plan states that the Federal Government will continuously assess the ability of the national economy to meet all mobilization and civil defense requirements, and will develop programs for the emergency control of the economy.

*1. Supply-requirements studies*

OCDM maintains close liaison with DOD and AEC to keep abreast of changing production requirements. A series of national supply-requirements mobilization studies has been made for wars not involving attack on the continental United States. OCDM and DOD are developing procedures for introducing attack considerations in supply-requirements studies. Stated military requirements for both limited and general wars are now so small that the major impact in future studies is expected to be from stepped-up nonmilitary defense or rehabilitation requirements.

A more extensive study of our postattack ability to rehabilitate and reconstruct the economy after an attack on this country is in its initial stages. Projects are now underway to identify the vital industries and industrial processes and to obtain information which would be necessary to rebuild such industries and provide for their restoration in places that would be less vulnerable to attack.

A study is underway to identify possible Latin American contributions to our postattack supplies.

*2. Operating plans*

The two principal Federal emergency operating plans which implement the national plan are plan D-minus and plan C. Plan D-minus was revised during the year to broaden the planning base by assuming the possible simultaneous use of bacteriological and chemical warfare agents with crippling nuclear attack. It is to be used as the basis for the further development of operating plans by the departments and agencies to meet the situation described in the plan.

During the year the revision of plan C was also begun. The plan was designed to deal with an international situation in which United States forces are engaged in military combat at sea and overseas. A further revision is being developed to cover a range of possible situations extending from a threat not much greater than that which exists today to a condition where the possibility of general war is deemed to be very great. Such a situation may or may not include military combat and will afford far greater flexibility in dealing with situations of varying severity.

The major Federal policies outlined in plan D-minus were modified as required and tested in Operation Alert 1959. While the overall Federal emergency plans must undergo continuous revision and refinement as the nature of the threat to our Nation changes, the results of the test exercise and other studies clearly demonstrate the need for the development of Federal emergency plans and emergency operating procedures which will assure a substantial degree of regional self-sufficiency in the event of an attack. This will receive emphasis in the coming year.

*3. Emergency resource management*

The development of a capability to manage resources in an emergency period continues to be a primary objective in OCDM. Many aspects of this are yet to be worked out and tested, and efforts will continue to be applied to this problem during the coming year.

To assist in the development of this capability, OCDM has established an Interagency Emergency Resources Advisory Committee consisting of representatives of most of the Federal resource agencies. This Committee provides the mechanism with which a coordinated resources management capability will be built in the Federal establishment. It provides advice and assistance, and participates actively in the development of preparedness measures to meet probable emergency resource management problems. It coordinates Federal agency development of these measures and serves to establish in each of the Federal resource agencies a uniform basis for achieving national objectives in this field.

Much remains to be done to achieve an emergency resource management capability at the levels where survival actions must be taken initially—the States and cities. With few exceptions, States and localities do not have plans for carrying out their resource management responsibilities in an emergency, nor have they developed the capability required to carry out plans where they exist. This deficiency points not only to the need for better understanding of State and local responsibilities and national plans, but also for guidance and assistance to State and local authorities.

An essential condition to achievement of a management capability to deal adequately with resources in an emergency is a clear understanding by Federal, State, and local governments of the emergency roles which each must assume. For successful execution, the roles of each must in turn be premised on a determination to be guided by a common set of plants and policies, and there must also be experience at each level in operating pursuant to these plans and policies. Having developed the national plan and its annexes, OCDM is currently engaged in a major effort to achieve the needed detailed understandings at all levels. As Operation Alert 1959 demonstrated, there has been progress in the development of a resource management capability at the OCDM regions but, with some exceptions, there has been little more than a start in obtaining such a capability at State and local levels.

*4. Food*

The more than 3,000 county, State, and regional offices of the Department of Agriculture have the personnel and potential capabilities for handling postattack food management problems and their training is underway. In addition, OCDM plans to establish a new Food and Water Office to insure that its leadership role is fulfilled. A national food plan (annex 31) is nearing completion.

Both the distribution of existing food and the production of new food after attack would require supplies of transportation, fuel, and power, and the organization necessary to handle them. The interdependence of all resources means that greater efforts will have to be made by the resource agencies to exchange requirements information and make provision for adequate supplies of the resources to support food production and distribution.

*5. Manpower*

Manpower programs of OCDM have the following objectives: (1) a manpower organization in place and ready; (2) acceptable knowledge of present and foreseeable manpower requirements and supply; and (3) actions to reduce or eliminate manpower shortages.

A national manpower plan, annex No. 30 to the national plan, is now being readied for widespread distribution. Following its dissemination, field conferences will be held to initiate readiness activities among Employment Service, Selective Service, and State and local officials. The Department of Labor is assigned responsibility for emergency civilian manpower administration and is carrying on a training program among its 1,800 affiliated local Employment Service offices. Continuing work will be required in fiscal year 1960 to coordinate and integrate State and local plans with the national manpower plan.

Previous emergency supply requirements analyses of manpower are now out of date. There is still a very inadequate understanding about the techniques of developing manpower requirements. During fiscal year 1960, emphasis will be placed on developing improved data and methods for estimating emergency manpower requirements.

OCDM and the Department of Labor are conducting a second exploratory study of area skills in the Davenport, Iowa, area following an initial study last year in Grand Rapids, Mich. These surveys are to determine feasibility of developing cadres of skilled workers for civil defense purposes.

During the past year OCDM stimulated locally sponsored conferences on the use of professional, scientific, engineering, and technical skills. Officials of professional societies, industrial managers, college deans, and representatives of Government agencies met to determine and encourage the adoption of the most effective methods of using such skills. OCDM also promoted the formation of community groups to find and encourage talented youth to complete their education in needed specialties, to improve school curriculums with emphasis on science and mathematics, and to induce students to acquire higher education in needed skills.

Under the Defense Production Act and Executive Order 10660, OCDM is responsible for the management and policy supervision of the National Defense Executive Reserve program. The training of executives for key emergency positions in the Federal Government under this program is intended to provide the additional top-level manpower needed by the Federal Government to meet mobilization requirements. The number of reservists now total approximately 1,800 in 15 agencies and plans are to increase the number to 2,600.

*6. Fuel and energy*

During the past year, a new Office of Fuel and Energy was created within OCDM, with responsibility for mobilization planning in the fields of petroleum, gas, solid fuels, and electric power, and the dual objectives of increasing capability for emergency management of these resources and insuring adequate supplies to meet emergency needs. Substantial progress has been made in improving fuel and energy resources management capability at the regional and national levels, but there is very limited knowledge of these resources, much less a capability to perform the necessary resource management functions, in local and State governments.

Annex 33 (energy and minerals) is nearing completion. It defines responsibilities and organization for control of electric power, oil and gas, and solid-fuel industries under conditions of international tension, limited war, and general war.

Interagency fuel and energy studies underway include: emergency offshore loading facilities for petroleum products; survey of electric power in Alaska; and the long-range study of petroleum supply and demand, with emphasis on the United States.

*7. Production and materials*

Mobilization planning for production emphasizes the task of getting the remaining postattack industrial facilities back into operation. The Business and Defense Services Administration is developing plans for an emergency production agency and has already recruited about 1,000 Executive reservists. One major deficiency at present is the lack of BDSA field organization. Plans will be developed for a regional organization which will make use of BDSA and OCDM reservists on a coordinated basis.

The series of national plan annexes being prepared will provide guidance for training State and local officials and industrial personnel in the general plans for production management under emergency conditions.

Materials planning contemplates the release of strategic and critical materials from the strategic stockpile, for survival purposes after attack, upon request of the OCDM regional directors. GSA and the Department of Agriculture will be directed to determine the postattack condition and availability of the strategic materials in the Government inventory, and the Department of the Interior will be directed to assess damage to minerals facilities and appraise surviving production capacity.

A vital area, in which work is just beginning, is planning for the control of construction in an emergency.

*8. Economic stabilization*

Top priority is being placed on development of emergency measures for the restoration, continued functioning, and stabilization of our monetary and economic system in the relatively undamaged areas of the country, following massive attack.

In a nuclear attack emergency, initial reliance will be placed on interim stabilization administration by local and State authorities, instead of by the Federal Government. Accordingly, local, State, and regional authorities must be provided with preestablished policies and objectives to guide or influence their operations until national operations can gradually be made effective. During the next 2 years, maximum emphasis will be placed on improving operational capability at the regional, State, and local levels.

A serious deficiency continues to exist as to the Federal capability of creating and administering the emergency economic agencies which would be required in any mobilization. A general plan for an emergency stabilization organization has been developed, but the present relocation site and the staffing arrangements are almost wholly inadequate.

To correct this, a protected site which will greatly increase operational capability is now being planned for construction. The Executive Reserve will be increased from 12 to approximately 100 persons. The regional civil defense and defense mobilization plans now being developed will provide a basis for supporting local and State economic stabilization operations, and Executive reservists are being recruited at the regional and State levels of operation.

Techniques for local rationing are being developed. A seminar to explore unprecedented postattack rationing problems and techniques, as they involve local and State operations, will be held this fall by the Brookings Institution under contract with OCDM. In this some connection, a pilot project is to be initiated in Sonoma County, Calif., to test the capability of a local area to deal with this kind of responsibility.

*9. Telecommunications*

Executive Order 10705, approved April 17, 1957, vests in the OCDM Director full responsibility for the direction of U.S. telecommunications upon declaration of war or following an attack upon the United States. Emergency telecommunication programs and procedures which have been developed include provision for the priority use and resumption of vital telecommunication service, as well as tentative procedures for claiming essential telecommunication service and related resources under a situation in which the United States is attacked. Plans have been promulgated for Government use of certain common carrier channels of communication to oversea points, and for the use of radio frequencies between 10 kilocycles and 30,000 megacycles, during emergencies.

A machine recordkeeping unit of the Interdepartment Radio Advisory Committee has been established at a relocation site and forms the nucleus of an advance cadre of an emergency communication agency. The organizational structure of this agency has been determined and key personnel are being recruited from industry through the Executive Reserve program.

*10. Transportation*

A national transportation plan (annex 34) has been completed, which brings together a number of Federal standby measures, including the Civil Reserve air fleet program, war air service pattern, Interstate Commerce Commission transport mobilization orders, plans for emergency utilization of ports, and others.

Arrangements have been made for the establishment of an emergency transport agency to coordinate government and industry transportation activities under mobilization. Sponsorship of important segments of the organization is vested in the Department of Commerce (Defense Air Transportation Administration, Maritime Administration, and Bureau of Public Roads), the Interstate Commerce Commission, and the Civil Aeronautics Board. Orders have been prepared which assign transportation planning and readiness functions to these agencies.

The operational readiness of the transportation agencies is strengthened by nearly 300 executive reservists who are being trained for key positions in the emergency organization at both the national and field levels.

Most States and the larger cities of the Nation have transportation and traffic plans as part of their overall defense and survival programs. New delineated policies and responsibilities in annex 34 will make it possible to bring these plans into uniformity and conformance with Federal guidelines. A special report on transportation was rendered at the request of the Joint Committee on Defense Production on March 31, 1959.

Work is continuing on programs for the overall analysis of military and civil demands upon transportation which was the concern of the House Committee of the Armed Forces during recent hearings. Additional active programs include those of highway regulation under fallout conditions, international shipping controls, and procedures for the priority movement of food and other critical items.

*11. Wartime censorship*

The major emphasis on censorship planning during fiscal year 1959 was on the development of a readiness capability in conformity with the overall plans for the executive branch of the Government. In coordination with the Department of Defense, consideration is bing given to establishment of a regional organization for wartime censorship similar in concept to that of other executive agencies. Current plans call for development of an executive reserve program to support such an organization.

## III. Supporting Functions

### A. RESEARCH AND DEVELOPMENT

OCDM research is primarily applied research directed toward the practical application of science to the problems of civil defense and defense mobilization. OCDM obligated $3.3 million for research in fiscal year 1959, and received a $4 million appropriation for fiscal year 1960.

In fiscal year 1959 primary emphasis in the research area was placed on problems of (1) shelter design, (2) radiological defense, (3) operations research; (4) health, (5) economic, social and other problems and, (6) refinement of operational survival plans. During fiscal year 1960, major emphasis will be placed on (1) the construction of prototype shelters which is expected to absorb approximately $2.5 million of the available funds, (2) continued radiological defense research, (3) operations research on broad systems of nonmilitary defense, (4) shelter habitability and engineering tests, and (5) economic and social sciences studies.

### B. TRAINING AND EDUCATION

The best planning, research, and operational equipment will fall short of providing adequate civil and defense mobilization unless people understand what has to be done, and are trained to do their part of the job. OCDM carries on extensive training and public information programs to strengthen this vital link in civil and defense mobilization preparedness.

Three training schools are operated: the Staff College, the Radiological Defense School, and the Eastern Instructor Training Center. A Western Instructor Training Center is now being staffed. Emphasis by OCDM on instructor training has a multiplier effect in achieving general public training.

OCDM also has an agreement with the U.S. Office of Education to develop a civil defense adult education program by means of contractual arrangements with four State departments of education. It will be expanded to additional States during fiscal year 1960. This program will involve instructor training through traveling teams, and courses for the general public through educational television stations, service clubs, etc.

OCDM's public education and information program currently emphasizes implementing the national policy on shelters, and the self-help aspects of the national plan.

### C. FEDERAL ASSISTANCE

Under the terms of Public Law 85–606, the Federal Government, for the first time, is allowed to help pay essential personnel and administrative costs of State and local civil defense organizations. This legislative change should make it possible to increase Federal financial assistance to the States in future years and to make these funds more effective in contributing to a coordinated national preparedness program. To date, however, the Congress has not appropriated any funds to carry out this part of the act.

Federal matching funds contributed to States, territories, and possessions for civil defense programs amounted to 9.2 cents per capita in fiscal year 1959 as compared with 9.7 cents per capita in 1958. Eligible items include warning and voice sound equipment, communications equipment, health and special weapons defense equipment, control center construction and equipment, as well as training, education, and public information programs. More than 50 percent of the expenditures in this program was for communications equipment.

Since 1957, when Congress authorized making Federal surplus property available to States for civil defense purposes, surplus equipment originally costing more than $83.5 million has been donated for this purpose. Motor vehicles and trailers, electrical equipment, firefighting and rescue equipment, construction and excavation equipment, communications equipment, tractors, engines, and hand tools are items most commonly donated. This program is accelerating rapidly, from about $32 million worth of equipment in fiscal year 1958 to $48 million in fiscal year 1959 and an estimated $65 to $70 million in fiscal year 1960.

### D. TESTS AND EXERCISES

Operation Alert 1959 consisted of a public civil defense alert exercise in April, followed by resource management and operational exercises in May for local units, in June for State units, in July for regional offices, and in August for the National Government. This made it possible for each echelon to deal adequately with the problems it faced, on the basis of a full flow of information from the previous phase. In the past, exercises have been hampered because the compressed time proved insufficient to get problems passed up the line for decision.

The exercises for the first time introduced postattack resources management problems at the local level. They also were the first exercises based on the national plan. The results produced refinements in emergency plans and procedures of the Federal agencies at all levels, strengthened working relationships between Federal agencies, effectively identified major postattack problems in many areas, laid the groundwork for cooperative emergency action of Government officials at all levels, and emphasized State and local responsibilities for postattack resources management. The operating field units of State and Federal agencies participated more fully than in prior exercises, and operational planning and readiness were enhanced accordingly.

## COMMERCE DEPARTMENT

THE SECRETARY OF COMMERCE,
*Washington, D.C., September 30, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*U.S. House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: The Department of Commerce report is submitted herewith for your use in connection with the ninth annual report of your committee.

We have recently made an intensive analysis of our present capabilities for national emergency action with a view to strengthening our readiness. As one result, we have formed and begun the training of a hard-core group of senior and middle-level personnel for assignment to special duties in event of emergency. We look upon this group as one of the principal means of assuring continuity of the most urgent functions of this Department at the national level; for example, forecasting of weather and atomic radiation hazards; management of air, sea, and highway transportation resources; charting of airways and channels for our planes and ships; collecting vital data; assessing the damage to our factories and restoring the manufacture and distribution of the weapons and products most essential to military support and civilian survival.

Unfortunately, many of the fundamental steps for advancing preparedness have price tags. It is our conclusion that we, among others, have a long way to go to become really fortified against the ultimate possibilities in this nuclear age.

Attached are the detailed reports of the organizations of this Department, with the exception of the Business and Defense Services Administration, to whose representative your staff has indicated approval for an extended due date, and whose report will follow shortly. I trust that the information will be helpful to your committee in its highly important task. You and the members of your Committee and its staff are invited to confer from time to time with our secretarial officers, bureau heads, and staffs on the matters of our common interest.

Sincerely yours,

F. H. MUELLER,
*Secretary of Commerce.*

THE SECRETARY OF COMMERCE,
*Washington, October 14, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*U.S. Congress, Washington, D.C.*

DEAR MR. CHAIRMAN: On September 30, I forwarded to you material for the ninth annual report of your committee.

As mentioned at that time, the report of the Business and Defense Services Administration was not included owing to an extended due date approved by your staff. This report has now been completed and is transmitted herewith.

Sincerely yours,

F. H. MUELLER,
*Secretary of Commerce.*

Attachments.

### PART I. MOBILIZATION ACTIVITIES AT THE DEPARTMENTAL LEVEL

An overall departmental program of mobilization readiness is actively maintained through the Office of the Secretary. On August 11, 1959, the Secretary addressed a memorandum to heads and supervisory personnel of all primary organizations of the Department, as follows:

"For more than 5 years the Department of Commerce, as an entity, has been concerned with and involved in civil defense and defense mobilization matters. A few of the Department's primary organizations have had longstanding and continuing mobilization planning functions as a major part of their statutory responsibilities. Other organizations have, by redelegation from the Secretary of Commerce, been given responsibilities in the field of emergency planning and operations. Programs pertaining to training for individual survival and the continuity of essential functions have become a responsibility of all organizations and offices within the Department. Those nonmilitary defense activities not

assigned by statute, have been delegated to the departments and agencies of the executive branch by the President of the United States through the Director of the Office of Civil and Defense Mobilization.

"I want to reiterate and emphasize that this program has been initiated and is now in effect by direction of the President and that he considers it of vital importance to our national defense. It is incumbent upon all of us, in carrying out the President's directives, to develop an operational capability that will insure the continuity of those essential functions of the Department, upon which may depend the survival and rehabilitation of our Nation in the event of a nuclear attack.

"The responsibility for the initiation, development, coordination, and testing of the civil defense and mobilization plans of the Department as a whole, and of its constituent agencies, has been delegated to the Emergency Planning Coordinator under the direct supervision of the Assistant Secretary for Administration.

"I wish to assure you that I consider this program as an integral part of the Department's operations and vital to the defense preparedness of our Nation in this era of continuing threat to our national existence and way of life.

"It is my desire that the head of each primary organization and office and all supervisory personnel give this program their personal direction and support to the end that a satisfactory degree of operational readiness will be attained as soon as practicable. It is expected that adequate and competent personnel will be assigned to this program. Detailed costs should be submitted with your 1961 budget requests which will be reviewed by the departmental staff to insure that appropriate emphasis is placed on this activity."

Among the emergency planning activities with which departmental personnel are concerned, in addition to the mobilization programs of the constituent agencies, are the following:

1. *Communications.*—The Department of Commerce Communications Corps consists of over 100 specially trained persons from the various bureaus, kept in readiness for emergency communications assignments. Most of the members of this group have regular jobs in fields other than communications but maintain their communications skills through training courses and exercises conducted throughout the year. The existence of this reserve group insures that the key communications facilities at the Department's relocation sites will be competently manned for exercises or in the case of an actual emergency when some warning time is available. To provide against a situation of sudden attack, the best solution would seem to be a program of part-time employment of local personnel for communications training at the relocation sites, but this degree of development has not yet been undertaken.

2. *Relocation.*—Two problems relating to the use of relocation sites were described in the Department's report last year; the lack of protection against radioactive fallout, and the lack of a group of qualified personnel already positioned at these sites. With the growing awareness of the fallout hazards and the prospects of shorter warning time (if there be any warning time at all), the need for a revision of relocation plans has become evident. An interim plan has just been placed in effect in this Department through the formation of a highly qualified alert cadre of key employees selected from the much larger group of relocatees. This group will be subject to orders, on short notice, to report for duty outside of Washington in the event of increased international tension. However, until the Department has a relocation site with adequate shelter against fallout, little further progress is likely. Estimates have been made recently of the cost of such shelter, as the first step in a revised and more realistic program.

3. *Civil defense activities.*—The Department is continuing training in the civil defense operational fields of building warden, rescue, first aid, and firefighting. Major emphasis is being placed on the relatively new field of radiological defense. Approximately 10,000 employees in Washington and the field have now received a special 2-hour indoctrination course as a familiarization with radiation hazards and this course will continue until all personnel of the Department have received it.

Over a hundred radiological monitoring instructors have been trained and these have already trained 2,320 monitors. Many of these monitors are assigned to the OCDM fixed station network. Aside from the fixed station monitors, a quota has been set for 1 out of 25 personnel to receive monitoring trainings. Courses are now underway in this subject. The Department has trained 18 radiological defense officers and contemplates further training as required to meet an operational state of readiness.

4. *Transportation.*—The Under Secretary for Transportation has the continuing responsibility, among others, to develop and promulgate in cooperation with the Office of Civil and Defense Mobilization, emergency plans of those transportation agencies which are under his supervision, or under the direction and supervision of the Department. The agencies under the supervision of the Under Secretary for Transportation are the Bureau of Public Roads, Coast and Geodetic Survey, Defense Air Transportation Administration, the Maritime Administration, and the Weather Bureau, and they constitute the largest concentration of agencies having transportation responsibilities in one department of the Executive Branch. The St. Lawrence Seaway Development Corporation plans must also be geared with those of the Department. The authority for the mobilization function in the Department stems from the Organic Act of the Department of Commerce.

During Operation Alert 1957 and 1958 the Under Secretary for Transportation was appointed as the acting head of an Emergency Transport Agency. The functional approach used in 1958, in contrast to the collective operation of the individual agencies in 1957, disclosed the organizational benefit of the functional approach. However, planning along both lines is necessary since the collective operation of individual agencies will be necessary in the event of surprise attack. Operation Alert 1959 was under the aegis of the Chairman of the Interstate Commerce Commission. The organizational structure used in Operation Alert 1959 contained many of the elements of the 1957 organizational structure. No further test of this organizational concept was afforded in 1959 because the operation was primarily an evaluation operation.

5. *Planning for production mobilization.*—One of the Secretary's most important responsibilities is the planning of the Government's program for emergency production. The Business and Defense Services Administration carries out the greater part of this planning, with the active cooperation of the Secretary, the Assistant Secretary for Domestic Affairs (under whose jurisdiction BDSA is assigned), the Assistant Secretary for Administration, and the departmental staff offices.

A matter presently of concern to the Department is the development of greater capability for regional management of emergency production. There is now greater recognition of the need for full-time Federal personnel at the regional level who can prepare the way for, and act as a link with, the strong executive reserve group in the production area.

6. *Emergency service activities.*—In addition to mobilization activities under the Defense Production Act, a number of other programs and services having a bearing on mobilization readiness are carried out by the agencies of this Department. These were reported in detail last year and the major activities of this kind are included in this report.

In that the Department is particularly interested in all plans of its agencies that relate to a transition from a peacetime to an emergency situation, there is concern that little progress can be reported in the planning by the various agencies for the emergency reassignment of their nonrelocatee personnel to other Bureaus of the Department, or to specific civil defense activities outside their respective Bureaus. Because of the magnitude of such a program, including possibly the reserve training of individuals in the duties of their prospective emergency reassignments, it seems unlikely that measurable progress can be made without a strong centralized Government-wide program for this purpose.

## PART II. MOBILIZATION ACTIVITIES OF INDIVIDUAL AGENCIES OF THE DEPARTMENT OF COMMERCE

### Defense Air Transportation Administration

The Defense Air Transportation Administration conducts the following mobilization functions:

(*a*) Civil Reserve Air Fleet
(*b*) National Emergency Defense Airlift
(*c*) Coadministers air priority system
(*d*) War air service program
(*e*) Administers aviation war risk insurance program
(*f*) North Atlantic Treaty Organization (NATO) Civil Aviation Planning Committee

*Authority*

These functions are authorized by the Defense Production Act of 1950 as amended, Executive Orders 10219 and 10480 and Departmental Orders 137 and 139.

These programs may be summarized as follows:

*Civil Reserve Air Fleet (CRAF).*—DATA allocates from the civil air carrier fleet sufficient aircraft to meet needs for military airlift as outlined in requirements supplied by the Joint Chiefs of Staff.

DATA makes these allocations from among the four-engine aircraft suitable for international operations and modified to military specifications for availability as soon as possible, but not later than 48 hours following an emergency. DATA participates with the Military Air Transport Service (MATS) and airline personnel in the functioning of Operations Boards established in the Atlantic and Pacific Areas to direct the operations of the aircraft allocated by DATA to the Civil Reserve Air Fleet. DATA, together with the Department of Defense and industry representatives has prepared a Civil Reserve Air Fleet contract which provides for reimbursement of civilian air carriers for their participation in CRAF and establishes manpower requirements to be met by the participating air carriers. DATA maintains a standing inventory of the available civil air carrier aircraft. DATA reallocates from time to time, in order to meet revised military requirements developed by the JCS and as new and more modern equipment is acquired by the air carrier industry.

*National emergency defense airlift (NEDA).*—The National Emergency Defense Airlift (NEDA) is a plan, developed by DATA, for the utilization of the more than 800 business and privately owned multiengined aircraft in the 12,500-pound class and over. This plan provides for the use of these aircraft on a voluntary basis for emergency airlift in support of civil defense and other essential needs in the initial stages of a national emergency.

*Air priority system.*—By written agreement between the Secretaries of Commerce and Defense, a system for establishing priorities for traffic on U.S. nontactical military and civil transport aircraft is to be administered jointly by DOD and the Department of Commerce. An Air Priorities Board will consist of the Administrator, DATA, and a DOD representative, with the Director appointed by DOD.

*War air service program.*—Under Executive Order 10219 the Secretary of Commerce is given overall responsibility for mobilization and use of civil aviation in time of war. Under this authority, the Secretary of Commerce has delegated to the Chairman of the Civil Aeronautics Board the responsibility for planning routes and the distribution and redistribution of civil aircraft among the civil air carriers after military allocations by DATA. This delegation (Department Order 139) provides that the Chairman shall act only after consultation with the Administrator of DATA. The Chairman of the Civil Aeronautics Board is made the action agent and DATA the coordinating agency to assure the most effective utilization of the War Air Service Program.

*Aviation war risk insurance.*—Title XIII of the Federal Aviation Act authorizes the Secretary of Commerce to provide aviation war risk insurance if such insurance is not obtainable under reasonable terms and conditions from a company authorized to do business in a State of the United States. The Secretary has made a finding that such insurance is not available and delegated the responsibility under the act to the Defense Air Transportation Administartion.

*North Atlantic Treaty Organization (NATO) planning.*—The Administrator of DATA serves as Chairman of the United States Delegation to the Civil Aviation Planning Committee (CAPC) of the North Atlantic Treaty Organization (NATO). A DATA staff member is the United States representative on the Planning and Logistics Group of CAPC.

The need for the Defense Air Transportation Administration, and the major problems facing it can best be illustrated by describing briefly the present size of the CRAF fleet and the role it fills in defense. The present, fiscal 1960, CRAF fleet consists of 244 aircraft. Of these 18 are Boeing 707 jets, 44 DC7 and DC7C's aircraft, 44 DC6A's, 35 L1049H's, 21 L1649A's, and 82 DC4's. This compares with a total MATS fleet of about 400 aircraft with a lift capability of the two fleets being approximately equal.

At the present time jet aircraft are being acquired by the airlines at the rate of approximately two a month. Since the lift capability of one Boeing 707 exceeds that of six DC6's, the impact of these acquisitions on the airlift capabil-

ity of the United States is of major proportions. In the past DATA has allocated aircraft on an annual basis. Because of rapidly changing aircraft inventory, informal requests by DOD have been made that the allocation be made more often.

### Bureau of Public Roads

*1. Mobilization programs conducted by your Department*

Integration of the needs of national defense with the national highway program, continuity of the Bureau of Public Roads and the State highway departments in event of emergency including organization and procedures to enable the effective performance of assigned wartime missions.

The Bureau of Public Roads is the agency which discharges Federal responsibilities for highway construction, preservation, and operation (and regulation when authorized), including preparation for the continuity of these functions in the event of emergency. In an emergency it has the dual responsibility, either directly, through the respective State highway organizations, or otherwise, to maintain in operable condition the entire available highway network of the Nation and routes of strategic importance elsewhere (and to regulate highway traffic as necessary and when authorized to expedite the movement of essential civilian and military traffic). These responsibilities may likewise be exercised in areas under military jurisdiction upon agreement between the military commander and the Bureau of Public Roads.

More specifically, the Bureau has been given to understand by the Office of Civil Defense Mobilization that the Bureau of Public Roads is responsible for (*a*) Development of plans for a national program, in cooperation with all local, State, and Federal Government units or other agencies concerned, for technical guidance to States and direction of Federal activities relating to the following functions:

(1) *Utilization.*—Develop plans for the utilization of highways and streets under conditions of enemy attack, including all necessary provisions to safeguard and facilitate public highway travel.

(2) *Restoration.*—Develop plans for the most effective utilization of the Nation's highway engineering and construction resources for, and direct Federal activities concerning the emergency repair, restoration, and provision of highways, roads, streets, bridges, and tunnels.

(3) *Traffic control.*—Develop plans concerning highway traffic control problems which may be created during a civil defense emergency.

(4) *Fallout hazards.*—Develop plans for barricading and/or marking streets and highways, leading into or out of restricted fallout areas, for the protection of the public by external containment of traffic through hazardous areas.

(5) *Defense requirements.*—Determine and evaluate, with the cooperation of the States, counties and cities, the needs for highway adaptions to meet emergency requirements and assist in developing cooperative programs to meet such needs.

(6) *Claimancy.*—Act as claimant for manpower, equipment, materials and supplies for all programs for public highway construction and maintenance, including urban streets regardless of financing.

*2. The authority from which your department derives its powers for such programs*

The Federal Highway Act of 1921 and subsequent highway legislation now codified and enacted into positive law as title 23, United States Code; Executive Orders 10219, 10346, 10480; Defense Mobilization Orders 1–8, 6–2, 7–5; delegations from the Office of Civil and Defense Mobilization, which delegations are currently under review and revision (see supra).

*3. A summary of each program*

(1) Administration of National System of Interstate and Defense Highways and other Federal-aid highway programs including appropriate treatment of national defense aspects.

(2) Administration of the defense access, replacement and maneuver road program to meet special highway needs of defense agencies beyond those which can be met by normal highway programs.

(3) Administration of foreign highway programs.

(4) Construction of highways in the Federal domain.

(5) Research activities in the highway field, including those having special defense significance.

(6) Direction and coordination of State highway departments' efforts to attain a state of readiness to meet an emergency.

(7) Administration of authorized programs of stockpiling of highway construction and maintenance materials, equipment, and supplies.

(8) Exercise of Federal leadership for cooperative action by highway agencies in effecting restoration and reconstruction of damaged highway facilities in a national emergency.

(9) Stimulation of adequate planning and development of operating capabilities by all highway agencies to meet emergencies, including those activities necessary for survival and functioning of State highway departments and their personnel.

(10) Preparation of plans and procedures for the administration of allocations and priorities functions applicable to highway construction and maintenance materials, equipment and supplies, including for all highway agencies at all levels of government, the claimancy function and the function of establishing priorities within highway allocations.

(11) Cooperation with the Office of Civil and Defense Mobilization, DOD, and other Federal agencies on special programs, such as the development of prototype shelters for the protection of the traveling public on highways at the time of enemy attack.

(12) Provision for continuity of essential functions under emergency conditions.

(13) Development of plans and procedures for the preparation when authorized of an inventory of essential motor vehicles.

(14) Development of plans and procedures for the regulation, when authorized, of traffic over highways and allocation of road space to essential users when such road space is restricted by radioactive fallout or otherwise damaged by enemy attack.

(15) Cooperation with State highway departments and the Office of Civil and Defense Mobilization in effecting temporary repair and emergency replacement of highways and highway facilities damaged as the result of a major natural disaster.

*4. A summary of the effectiveness of the programs*

The total program developed by the Bureau to meet the exigencies of enemy attack would be fully effective in minimizing the effect of such an attack on the Nation's highway system when this program shall have been developed to a point where all agencies (Federal and State) are fully in a position to implement it.

*5. A statement of the current need for this program*

The Bureau does not undertake to appraise the international situation. It is believed, however, that competent authorities within the Government consider that this situation is such as to emphasize the continuing need for the programs.

*6. A summary of the programs as related to small business*

In the vast majority of highway programs, the actual contracts for construction are awarded by the States to which Federal funds have been allocated. In the awarding of these contracts, the interests of small business are given appropriate consideration.

*7. Major problems which now confront your department in carrying out mobilization programs*

In time of war or grave national emergency, the long-standing cooperative relationship between the Bureau of Public Roads and the State highway departments must be continued and strengthened. Any disturbance of this relationship would make it impossible for the Bureau to accomplish the wartime duties assigned to it. The uncoordinated planning developed in some of the States ignores the need for this continued relationship in time of war and may result in creation of intervening wartime authorities which would disturb or even render wholly ineffective this fundamental relationship. It is, accordingly, of the greatest importance to insure that plans developed by the Bureau of Public Roads in concert with the State highway departments, and approved as being in consonance with the national plan, are not nullified, vitiated or ignored by such wartime authorities.

Another problem is that guidance is lacking for the establishment of transportation agencies, particularly at local level, to allocate available transportation to claimants and users having highest priority need. The Bureau of Public

Roads, the State highway departments, and the State police are limited in developing operational readiness in the field of traffic regulation until plans are completed at local level to integrate activities of the nonexistent transportation agencies.

*8. Changes in mobilization planning and readiness measures to meet future emergencies*

Last year, the Bureau reported that "it cannot report any meaningful accomplishments in this field until it is in a position to make provision for the protection of its personnel. The development and elaborate documentation of mobilization plans, when we cannot be even reasonably sure that key personnel will remain alive to give effect to them, appear quite futile. Until adequately protected offices are established, no real achievement with respect to the continuity of its function can be reported."

The Bureau is seeking authority to proceed with plans and specifications for such buildings for its regional offices.

*9. Progress achieved in the continuity of production, and dispersal of industry*

The continuity of production and dispersal of industry are not direct responsibilities of the Bureau of Public Roads. However, as reported last year, highway transportation contributes in an important way to the Nation's chance for survival by facilitating the dispersal of industry and population. Industry is being attracted to new areas being made increasingly accessible by the National System of Interstate and Defense Highways, to which new and dispersed sites it can now draw workers from greater distances because of the greater ease of travel over the new highways. Industry, becoming so located along the Interstate System, is developing a pattern of dispersal which creates a more difficult and less remunerative target for attacks from the air.

*10. Summary of any standby programs for any future emergency*

See above for all programs related to the possibility of enemy attack. Emergencies of other types, e.g., financial, economic, will be evaluated and recommendations presented to the Congress as they arise.

*11. Changes in organization during the past year*

None.

*12. Future objectives*

The objective of the Bureau is to achieve plans of sufficient flexibility to tbe applicable to a post-attack situation whatever it may be, a satisfactory degree of readiness on the part of its own organization and of the State highway departments to meet a postattack situation on the basis of such plans, and a level of awareness of such plans on the part of others who may be concerned, to the end that the plans will not be rendered ineffective by uninformed interference.

*13. Availability of funds for defense needs*

Funds presently authorized and appropriated are not adequate to enable the Bureau to achieve a satisfactory level of readiness for itself or for the State highway departments.

*14. A description of the manner in which your mobilization programs fit into a defense plan, and the objectives to be achieved*

The mobilization planning of the Bureau of Public Roads is fully coordinated with broad defense plans of the Department of Defense, and the Office of Civil and Defense Mobilization.

The objective of the Bureau is to plan for maximum utilization of facilities available to it and to the State highway departments for the greatest possible utilization of highways for the movement of essential traffic.

*15. Such other information as may appear pertinent in summarizing your mobilization activities for the past year*

The Bureau considers that it is of particular significance to emphasize its effort during the past year to develop a greater degree of understanding, on the part of State highway departments, in its plans and programs to meet a grave national emergency. Under the guidance of the Bureau, nearly all of the State highway departments participated actively in Operation Alerts 1958 and 1959, following guidelines developed by the Bureau specifically applicable to the problems in the highway field which can reasonably be expected to eventuate. Further, meetings have been held throughout the country, attended by personnel

of the Bureau and representatives of the highway departments of each of the 50 States and Puerto Rico, for the detailed explanation and discussion of mobilization plans. These discussions were quite helpful in developing a far greater degree of awareness on the part of all concerned regarding the kinds of problems with which they would be faced.

### Federal Maritime Board-Maritime Administration—Report of Mobilization Activitives, Sept. 1, 1958–Aug. 31, 1959

*International mobilization activities*

The 11th meeting of the Planning Board for Ocean Shipping (PBOS) of the North Atlantic Treaty Organization (NATO) was held in London on April 20, 1959. The Maritime Administrator, as the U.S. representative on the Planning Board for Ocean Shipping attended this meeting, together with members of the staff of the Maritime Administration and the Department of the Navy.

The Board, in close cooperation with the NATO naval authorities, plans for the mobilization, control and protection of merchant shipping in order to render it effectively and readily available to meet the needs, both military and civil, in the event of war.

Authority: North Atlantic Treaty Organization.

*Priorities and allocations program*

As a claimant agency for ship construction (ocean-going), the Maritime Administration processed priorities and allocation actions under redelegation from the Department of Defense covering four ships essential for defense purposes during the year. The priorities and allocations were handled under the regulations of the Defense Materials System.

Authority: Defense Production Act of 1950, Public Law 774, 81st Congress; the Merchant Marine Act, 1936, as amended; Executive Order 10480, as amended; Executive Defense Mobilization Order VII–7, dated March 6, 1957.

*Shipbuilding programs*

Under the broad authority of the Defense Production Act and the specific legislation indicated below, the shipbuilding program of the Maritime Administration, during the reporting period, consisted of the following projects:

1. Completed two P2–S2–9a and one P2–S2–11a passenger cargo ships and completed conversion of two passenger ships for American Export Lines and four cargo ships for American President Lines, all constructed under construction-differential subsidy contracts with allowance for national defense features, title V of the Merchant Marine Act, 1936, as amended.
2. Continued construction of a prototype tanker (T5–S–RM2a), Public Law 121, 84th Congress, 1st session.
3. Contracts for construction of 17 cargo vessels and conversion of 6 cargo vessels and 2 passenger-cargo vessels were awarded under title V, Merchant Marine Act, 1936, as amended.
4. Continued construction of a nuclear-powered passenger-cargo vessel and awarded a contract for construction of a special service barge for the NS *Savannah*—Public Law 848, 84th Congress, 2d session.
5. Continued construction of a hydrographic surveying ship for the Coast and Geodetic Survey, Department of Commerce, awarded under Public Law 85–115, 85th Congress, 1st session.
6. During the reporting period, construction and conversion was completed on 51 private merchant vessels totaling 1,641,110 deadweight tons, 38 of which are under American flag and 13 totaling 639,650 deadweight tons under friendly foreign flags.

The Maritime Administration continued to survey the existing privately owned shipyards capable of merchantship construction, in order to keep current records of their capabilities, including facilities and skilled personnel to handle planned programs.

A new basis for mobilization planning was outlined by the MarAd-Navy Planning Group Report No. 6, May 1, 1959, after many months of study. The new basis assumes that an emergency must be met by the then active fleet plus activation of ships from the reserve fleet and replacement of losses within the capability of surviving facilities. Based on this concept, emphasis is placed on upgrading the active fleet and on upgrading ship construction and repair facilities to handle ships of larger dimensions, weights, and advanced technology.

Authority: Defense Production Act of 1950, as amended, Public Law 774, 81st Congress; Merchant Marine Act, 1936, as amended; Defense Mobilization Order VII–7, March 7, 1957; Executive Order 10480, as amended.

Studies to determine the requirements for shipyard labor and shipways to carry out current and anticipated programs in the required time were made and used as guidance by the Federal Maritime Board in making determinations of contract awards of subsidy replacement ships to strategic geographic areas according to their need to maintain the industry in a healthy condition.

Authority: Public Law 805, 84th Congress, amending section 502(f), Merchant Marine Act, 1936, as amended.

*Maintenance of reserve shipyards*

The Maritime Administration has maintained on a stand-by basis four reserve shipyards located at Wilmington, N.C., Richmond, Calif., Alameda, Calif., and Vancouver, Wash., for reactivation in the event of mobilization. Based primarily on recommendations of the Department of Defense, the yards at Alameda and Vancouver have been declared as excess. The two yards being retained require constant maintenance to keep the structures in a state of readiness. To assist in the maintenance of these facilities, the Administration has leased a major portion of the Richmond, Calif., yard to commercial interests and a large portion of the Wilmington, N.C., yard is occupied by the North Carolina State Ports Authority. All leases provide for the maintenance of the property by the lessee. In addition, the Maritime Administration has continued to make available (on 30-day cancellation permits) to national defense contractors critical machine tools and metal working equipment from the reserve shipyards.

Authority: Defense Production Act of 1950, Public Law 774, 81st Congress: Executive Order 10480, as amended; Department of Commerce Order No. 128 (amended), dated November 1, 1958.

*Operation of warehouses*

The Maritime Administration operates five warehouses in which are stored supplies and equipment required for the activation of ships from the national defense reserve fleets in the event of mobilization, as well as for current and future ship construction, repair, and operation programs. Examples of emergency and defense programs during which the emergency reserve stock in these warehouses came into play are the Korean war and the DEW line program, both of which involved withdrawal, repair, and outfitting of reserve fleet ships.

Authority: Merchant Marine Act, 1920, as amended; Merchant Marine Act, 1936, as amended.

*Industrial readiness planning program*

The Maritime Administration is engaged in an interagency project identified as the industrial readiness planning program. The intent of this program is to inform private industry as to the probable demands of Government in the event of a general war in which the mobilization base would be damaged extensively and also the probable demands in a limited war where time and events would not preclude emergency preparations. The policies and general procedures of this program were promulgated by the Assistant Secretary of Defense for Supply and Logistics on July 14, 1959. Prior to this date, similar activity was conducted under the identity of interagency industrial procurement allocation program. The Department of Defense and the Maritime Administration are cooperating in this program to assure that the industrial strength of the Nation will be capable of meeting both the military and the military supporting requirements in a national emergency. The program is intended to alleviate to a maximum extent conflicting demands upon the same manufacturer by the armed services and the Maritime Administration.

Approximately 22,000 privately owned plants and factories are participating in the readiness program; about 1,100 together with 13 shipyards are planning with the Maritime Administration for the emergency repair, activation, and production of ships, supplies and equipment required by the U.S. merchant fleet in the event of war.

Authority: Executive Order 10480; Executive Order 10219 as modified by Executive Order 10480; Defense Mobilization Order VII–7.

*Ship operations programs*

*Navy merchant ship communications.*—The Maritime Administration entered into contracts with the Mackay Radio and Telegraph Co. and the RCA Service Co. for installation of necessary radion crystals aboard all presently operating

merchant vessels. This installation was necessary in order to provide communication on those frequencies required by the Department of the Navy in conjunction with its emergency plans for merchant vessels. As of June 30, 1959, 730 ships had been serviced, representing 63 percent completion of the program.

*Merchant ship radiological defense.*—The Maritime Administration continued its program to prepare merchant marine crews to defend themselves and their ships, cargoes, passengers and food supplies against radiological hazards. The Administration arranged with the Office of Civil and Defense Mobilization to provide monitoring equipment to crews of Government and privately owned merchant ships whose crews have been trained under programs sponsored by the Maritime Administration. The training program covering defense against radiological hazards, damage control, and fire-fighting continues to be well attended at the schools conducted in New York, San Francisco and New Orleans.

Authority: Executive Order 10219; Executive Order 10480, as amended; Defense Production Act of 1950, as amended, Public Law 774, 81st Congress; Merchant Marine Act, 1936, as amended.

*National defense reserve fleet*

The Maritime Administration maintains the National Defense Reserve Fleet, as authorized under the Merchant Ship Sales Act of 1946, as amended. It is composed of some 2,000 ocean-going merchant ships moored in eight fleet sites strategically located on the three coasts of the United States. These ships are in a preserved state and an annual program is conducted to maintain the ships in a sound condition.

The purpose of the National Defense Reserve Fleet is to assure the availability of ocean shipping capability required to support military operations and civilian requirements of the United States in time of war or other national emergency short thereof, such as the Suez and Lebanon crises.

Early this year, a joint committee of Defense and Commerce Department (MarAd) representatives completed a study of emergency ocean lift requirements which resulted in a determination that only 922 of the reserve fleet ships will be required in a national emergency. Steps are being taken for disposal of the unrequired ships, mostly Liberty ships, through sale for scrap purposes.

During the current fiscal year (1960), sufficient funds were provided to accomplish only half of the preservation work required to maintain the 922 priority ships in sound condition. If appropriations are continued at this level over an extended period, the integrity of the ships may suffer and their usefulness as an emergency reserve impaired.

Authority: Merchant Ship Sales Act of 1946, as amended.

*War risk insurance program*

The Maritime Administration administers the war risk insurance program authorized under title XII of the Merchant Marine Act, 1936, as amended. This program is designed to provide war risk insurance adequate to the needs of the water-borne commerce of the United States, including vessels, cargoes, loss of life and injury of crew members and other persons, and personal effects of crews, when such insurance cannot be obtained on reasonable terms and conditions from the commercial market.

Under this program, 4,289 interim war risk insurance binders were issued through June 30, 1959. This insurance covers the period between the time that commercial insurance, subject to a 48-hour cancellation clause in the event of an outbreak of war is automatically terminated by operation of such clause, and the time that a full wartime insurance program is placed in effect.

In addition to the above, war risk builders' risk insurance covering the prelaunching period on new construction is administered directly by the Maritime Administration as this coverage is not available in the commercial market. As of June 30, 1959, 72 policies had been issued. Cargo war risk insurance is presently commercially written; however, a stand-by program is in effect through contractual agreements made with cargo underwriting agents, 21 of which remain in effect.

The current need of the program is indicated above and is considered necessary to avoid disrupting or impeding the continued operation of vessels and is deemed to be in the interest of the national defense and the national economy of the United States. The Maritime Administration has presently under consideration the alternative of writing war risk insurance or amending the war risk binders as the commercial marine insurance market has indicated its reluctance to

continue writing war risk insurance for any period subsequent to the outbreak of war.

Authority: Public Law 763, 81st Congress; title XII, Merchant Marine Act of 1936, as amended.

*Ports and port facilities*

The Maritime Administration, by delegations of authority from the Interstate Commerce Commission and the Office of Civil and Defense Mobilization, is responsible for mobilization planning activities relating to port systems and facilities in the United States, its territories and possessions. These activities involve the following programs:

1. *Port inventory and capacity.*—This program involves current maintenance of an inventory of U.S. ports and port facilities and estimates of port "throughput" capacities. Includes piers of all types, i.e.: general cargo, petroleum, coal, ore, grain, general bulk; capacities of ports shown in three categories—current, stepped-up, and maximum potential; facilities shown in increments of from 350-foot berth lengths with 20-feet depth of water alongside to berths 500 feet and over and depths of 30 feet and over.

2. *Nuclear bomb damage assessment—ports.*—As a part of the program of the national damage assessment center, the Maritime Administration maintains nuclear damage assessment data on facilities at U.S. sea and Great Lakes ports and on inland waterway navigation locks and dams. The data include the location, capacity, structure, and vulnerability characteristics of such facilities, abstracted to punch cards.

3. *Port defense mobilization planning.*—This activity involves plans and programs for determining requirements to be imposed upon port systems and facilities; port expansion goals, programs, and financial incentives; adequate port mobilization base; port supply and requirements; operation and security of port systems and facilities under partial and full mobilization and attack and post-attack conditions; use of alternate ports; and restoration of ports in post-attack phase. Approximately 100 U.S. port communities are currently engaged or organizing to engage in preparedness planning for emergency port operations using as a common guide a Maritime Administration publication entitled "Current Planning for Operation of U.S. Seaports Under Emergency Conditions."

4. *Emergency port utilization and control.*—This activity involves the preparation of plans and programs for the emergency utilization and control of port systems and facilities including the Federal control organization; the control functions to be exercised; and the emergency actions to be taken in preattack and postattack situations.

The Maritime Administration has drafted an official Manual for the Emergency Utilization and Control of U.S. Ports. This manual, to which will be attached ultimately copies of proposed public orders and other necessary implementing documents, has been approved by OCDM; is awaiting final formal concurrence by the Department of Defense; and is referred to in Annex 34—National Transportation Plan of the National Plan for Civil Defense and Defense Mobilization.

Major problems confronting the port planning activities include the following:

Delay in obtaining a clear-cut inclusive delegation of authority to conduct these programs.

Funds to update and obtain necessary additional field data for the inventory of port facilities and estimate of port "throughput" capacities as well as for the national damage assessment program.

A requirement of minimum additional staff personnel to assist in all phases of port mobilization planning.

Delay to date of the Department of Defense in: providing requested information on emergency period military shipping requirements on ports; obtaining preallocation of ports and port facilities for extended exclusive military use, and advising on intended military utilization of ports of varying sizes and types under emergency conditions.

*Authority:* Defense Production Act of 1950, as amended; Executive Order 10480, as amended; and Interstate Commerce Commission Delegation TM–1, effective April 12, 1957.

*Maritime training*

The Maritime Administration operates the U.S. Merchant Marine Academy, Kings Point, N.Y., for the purpose of training U.S. citizens to become licensed officers in the U.S. merchant marine. During the year, this Academy had an

average enrollment of about 900 cadets, of whom about 200 were assigned to serve a year in merchant ships at sea. The Academy is capable of being expanded to quarter and provide training for up to 2,400 men, in the event of mobilization.

The Maritime Administration also administers a grant-in-aid program for State maritime academies, located in the States of Maine, Massachusetts, New York, and California. These schools had an average total enrollment of about 950 cadets.

The Federal and State Maritime Academies are currently graduating about 400 men per year. Graduates are licensed as third mates or third assistant engineers of oceangoing merchant ships and, under arrangements with the Department of the Navy, may be commissioned as ensigns in the U.S. Naval Reserve.

*Authority:* Merchant Marine Act, 1936, as amended; Public Law 415, 84th Congress; and Public Law 85-672, 85th Congress.

*Emergency preparedness program*

Significant actions taken during the reporting period to improve this agency's emergency preparedness include the following:

1. *Operation Alert 1959.*—The Maritime Administration participated with other Government agencies in the relocation exercise OPAL 1959, pursuant to directives of the Office of Civil and Defense Mobilization. This exercise served to test existing emergency plans and procedures, and to identify problems which would be encountered in operating from a relocation site under attack conditions.

2. *Interim Assembly Alert Cadre.*—Personnel of the Maritime Administration's Departmental Office participated in the Department of Commerce Interim Assembly Alert Cadre program. This program is designed to provide evacuation of a limited number of top policy officials of the various primary units of the Department in the event of a strategic alert. The participants took part in an orientation program, which included OCDM planning and Department of Commerce emergency planning; and functions at the OCDM relocation site.

3. *Emergency action manuals.*—There were developed emergency action manuals covering all activities required in the event of enemy attack and for mobilization in the field offices of the Administration's Pacific and Gulf Coast districts.

*National Defense Executive Reserve*

Pursuant to Executive Order 10660, a complement of National Defense Executive Reservists has been selected to serve with the Maritime Administration in key civilian positions during periods of emergency. These reservists have been selected, primarily, from various segments of the shipping industry.

During the past year, the Administration's complement for the Executive Reserve was increased from 123 to 309. We now have 84 designated reservists; have 80 in process of designation; and are continuing to recruit for the remaining 145 vacancies.

*Summary of the programs as related to small business*

With the probable effects of a nuclear attack in mind, the role of small business as a means to recovery has become most important. Many plans for production of marine materials and equipment are being made with the small factories, foundries and machine shops located in areas where bomb damage is deemed less probable.

Due to the nature of the work, small business is generally employed in accomplishing the maintenance work on Maritime Administration facilities, where such work cannot be performed by our own personnel.

Construction of ocean-going ships is beyond the capabilities of small business. However, subcontracting provides opportunity for participation by small business firms.

*Changes in mobilization planning and readiness measures to meet future emergencies*

The most significant changes are those referred to in the foregoing summarization of activities under our National Defense Reserve Fleet and our shipbuilding programs. To reiterate briefly these policy changes are with respect to the reduced military requirement for ships in the Reserve Fleets, namely, the Liberty ships, and the concept that an emergency must be met with the

ships of the active merchant fleet plus the priority reserve which alters ship construction mobilization requirements and gives greater emphasis to upgrading the peacetime merchant fleet, ship construction, ship repair and terminal facilities.

*Summary of standby programs*

With few exceptions, all Martime Administration activities covered in this report are, wholly or in part, in the nature of standby programs. These programs are designed to be implemented or expanded in the event of mobilization to meet the national defense requirements for merchant shipping. The major exception in this regard is, obviously, the ship construction program.

*Manner in which mobilization programs fit into defense plan and objectives to be achieved*

It is the declared policy of the United States, as set forth in the Merchant Marine Act, 1936, as amended, and the Merchant Ship Sales Act of 1946, as amended, to foster the development and maintenance of an adequate and well-balanced merchant marine, in the interest of national defense as well as its foreign and domestic commerce. The need for such a merchant marine for national defense purposes has been demonstrated in the past and was reaffirmed by the National Security Council, during the past year, under current strategic and logistic concepts of war.

In line wtih the above objectives, the mobilization programs of the Maritime Administration are developed in close liaison with the Department of Defense and its several components, as well as the Office of Civil and Defense Mobilization, and, at the international level, with the NATO naval authorities. This is necessary in order to assure that the mobilization plans of the Martime Administration will be in harmony with national and international plans for the naval control of shipping and be keyed to the requirements of the Department of Defense, in time of war or national emergency.

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## BUSINESS AND DEFENSE SERVICES ADMINISTRATION

### AUTHORITY AND RESPONSIBILITIES

The Business and Defense Services Administration was established on October 1, 1953, by Department of Commerce Order No. 152 (18 F.R. 6503) as amended and revised. It succeeded the National Production Authority which was abolished by the same order. The current version of Department of Commerce Order No. 152 (revised) was issued on September 22, 1958, and transfers the Office of Area Development to the Business and Defense Services Administration. The functions and authority of the Secretary of Commerce, including but not limited to those under the following, have been delegated by the Secretary to the Administrator of BDSA pursuant to Department Order No. 152:

1. Defense Production Act of 1950, as amended, providing for exercise of priorities and allocations powers, expansion of productive capacity and supply, and development of preparedness programs (except with respect to the use of transportation facilities and the creation of new agencies within the Department of Commerce.)
2. National Security Act of 1947, as amended, providing for a wide range of mobilization preparedness activities.
3. Strategic and Critical Materials Stockpiling Act of 1946, as amended, with respect to determinations as to which materials are strategic and critical, and the quality and quantity to be stockpiled.
4. Internal Revenue Code of 1954, as amended, with respect to accelerated tax amortization for specified national defense purposes.
5. Executive Order 10480, as amended, providing for administration of the nonmilitary defense mobilization program.
6. Executive Order 10421, as amended, providing for physical security of facilities important to the national defense and for direction of the Industry Evaluation Board by the Secretary of Commerce.

In addition, various Office of Civil and Defense Mobilization orders, denominated as defense mobilization orders, specify functions and authority under which BDSA engages in its defense production and mobilization preparedness activities. These include, but are not limited to, DMO I–7 (delegating priorities

and allocations responsibilities), DMO I–8 (assigning defense mobilization responsibilities to the Department of Commerce), DMO I–19 (providing for guidance and assistance in the application of dispersion policy), and DMO VII–5 (designating supply and requirements agencies).

### ADMINISTRATIVE DEVELOPMENTS AND PROBLEMS

It is believed that members of the Joint Committee on Defense Production are familiar with the problem which faced BDSA in the handling of its appropriation request for fiscal year 1960. Indeed, the chairman and vice chairman, as well as members of the committee, were most helpful in their efforts to insure that sufficient funds were provided to permit the agency to continue functioning. In response to your request to include in this report problems which confront the agency in carrying out mobilization programs, it seems proper to point out that problems surrounding the handling of BDSA's budget requests could again be encountered in the future.

This difficulty has beset BDSA, in particular, for two reasons. First, mobilization activities of the agency represent a very large proportion of its total activity rather than a small appendage to its normal functions. In fiscal year 1960 it is estimated that activities relating directly to national security and defense mobilization account for approximately one-half of the total expenditures in the industry area. Second, a great part of the results of the agency's work is used for both defense and nondefense purposes. Defense mobilization functions are inextricably woven into its normal activity.

The long continuing nature of the cold war and the increasingly close relationship between national security and economic health and development has resulted in blurring any real distinction between defense mobilization activity in BDSA and the normal economic functions of the agency. This view was aptly expressed by the Congress in section 8(c) of the Trade Agreements Extension Act of 1958. This act said in part, " * * * in the administration of this section, the Director (of the Office of Civil and Defense Mobilization) and the President shall further recognize the close relationship of the economic welfare of the Nation to our national security * * * ."

It is hoped that the Joint Committee on Defense Production may see fit to take such action as is in the scope of its responsibilities to continue to promote a wider understanding of the integrated nature of BDSA's defense mobilization responsibilities and industrial economics activities. Such wide understanding is essential to the discharge of the agency's functions during a continuation of international tension, as well as to provide operational readiness to meet the demands on our production resources occasioned by either a limited war or an all-out nuclear attack.

During the past year, BDSA continued to give full support to current military, atomic energy, and long-range industrial preparedness activities. The quarterly program review instituted by the Administrator's executive committee in July 1958 and the monthly progress reporting system is proving effective in establishing program priorities and in assuring that program objectives are being met on schedule.

The appropriation for fiscal year 1960 permits BDSA to maintain approximately the same level as staffing as in 1959. The junior executive development program initiated in fiscal year 1959 now has 11 participants, 6 of whom have advanced to the second phase of their 3-year training period. It is anticipated that the supervised intensive training given these employees will prepare them to assume increasingly responsible positions in the industry divisions and contribute toward carrying out the delegated responsibilities of BDSA, particularly with respect to the Defense Production Act.

The conduct of the defense production and mobilization preparedness activities of BDSA continues to require certain knowledge which is available only from men having recent industry background. These persons are appointed without compensation in accordance with the provisions of the Defense Production Act of 1950, as amended, and Executive Order 10647. As of September 30, 1959, 12 executives from private industry were serving BDSA in full-time advisory positions and 69 were on the rolls as consultants available for intermittent use as required. BDSA will continue to utilize the services of industry executives on a WOC basis as authorized by the Defense Production Act.

The Office of Field Services, with offices located in 33 important industrial centers throughout the United States, acts as the field liaison between the Business and Defense Services Administration and the business public in administer-

ing the mobilization functions of that agency under the Defense Production Act.

Field offices maintain contact with defense contractors and subcontractors as well as with procurement offices serving as a channel of communication between the agency and those affected by its regulations, policies, and procedures. In addition the field offices do whatever followup work may be necessary in gathering information for the industry divisions relating to such matters as returns on survival item reports and questionnaires. They maintain complete files on BDSA regulations and orders and provide assistance to firms requiring BDSA intervention on the delivery of defense materials.

Representatives of the Office of Field Services in the eight cities where OCDM maintains regional offices serve on OCDM regional advisory committees and participate in Operation Alert exercises.

### ADMINISTRATION OF TITLE I OF THE DEFENSE PRODUCTION ACT (AS AMENDED)

Under Title I of the Defense Production Act of 1950, as amended, the President is authorized to establish priorities in the performance of defense contracts and to require the acceptance and performance of such contracts for the purpose of assuring such priority. He is also authorized, under the same title, to allocate materials and facilities for the purpose of promoting the national defense. These priorities and allocation powers are administered by the Business and Defense Services Administration under delegation from the Secretary of Commerce to whom they have been delegated by the President through the Director of the Office of Civil and Defense Mobilization. The administration of these powers is accomplished through a series of regulations and orders designated as the defense materials system (DMS). In addition to the establishment of priorities for the Department of Defense and atomic energy programs, certain important projects such as the IRBM, ICBM and satellite programs, which have been specially designated by the President, are accorded superpriority treatment to insure that they take precedence over other defense programs. The DMS not only insures that current defense and atomic energy production and construction will remain on schedule but also provides an established system for prompt and effective use in controlling the Nation's economic resources in the event of war.

*Revision of DMS*

The committee was informed in the previous annual report that BDSA had undertaken a complete revision and simplification of the DMS regulations which have been in effect in their present form for approximately 6 years. During the year covered by this report a new DMS regulation 1 has been completed after several revisions and thorough review by other interested agencies of the executive branch including the Department of Defense, Atomic Energy Commission, and the Office of Civil and Defense Mobilization. This new DMS regulation, when issued, will replace the present DMS regulations 1 and 2 covering defense production and defense construction respectively. In addition to the interagency review of the new regulation a series of eight meetings was held with representatives of affected industries during the month of April 1959, to obtain their views with respect to the proposed revision. These conferences were held with representatives of the electronics, aluminum, nickel alloys, aircraft and missiles, copper and brass, automotive and iron and steel industries. A conference was also held with a cross section of controlled material-using industries. The consensus of the industry representatives at all of these meetings was an endorsement of the proposal to streamline the defense materials system and to continue the DMS as a means of supporting the Nation's current military and atomic energy programs as well as providing an important element in our posture of defense.

A number of recommendations for improvement of the proposed revised regulation were presented at these industry conference and a substantial part of them has been incorporated into a final revised draft of the new regulations. This final draft has been set up for printing by the Government Printing Office but publication in the Federal Register and public issuance will be withheld until the settlement of the current strike in the steel industry. The committee was informed of this decision by the Administrator of BDSA at a hearing held by the committee on August 18, 1959, at which time the Administrator stated that the issuance of the new DMS regulation was being withheld for a more propitious time following the resumption of operations by the steel industry. Coincident with the revision of the DMS regulations the related application forms and the

other forms needed for the operation of the system have also been revised to conform with the new rules. These new forms are being printed and will be distributed to defense contractors and affected Government agencies when the new regulation is promulgated.

The new DMS regulation has been substantially simplified and will result in the elimination of a great deal of paperwork for a large number of contractors.

One of the major changes incorporated in the new DMS regulation 1 is the elimination of the procedure for making allotments of controlled materials to producers of APRA B products (selected aircraft components). It has been found that the process of submitting applications by such producers and making allotments to them is no longer necessary and that they can fulfill their defense contracts effectively without this special procedure. Accordingly, under the new regulation, producers of APRA B products will obtain their production materials under the same procedures as producers of other class B products, that is, by self-authorization. In view of this determination, the Department of Defense requested that the simplified procedure for producers of APRA B products be put into effect as soon as possible, in advance of the publication of the revised DMS regulation. Accordingly, direction 5 to DMS regulation 1, accomplishing this simplification, was issued on June 17, 1959.

*Revision of BDSA order M–17*

BDSA order M–17, which has been in effect since October 1953, provides ceiling limitations for the required acceptance of rated orders by manufacturers of electron tubes (except power tubes), transistors, and crystal diodes. These limitations permit an equitable distribution of defense orders among the manufacturers affected and allow a portion of the monthly production of the listed products to be shipped against nonrated (civilian) orders. Power and transmitting electron tubes are necessary to the performance of the functions of police, aviation, utilities, industrial establishments, communications companies, research and development laboratories, broadcast stations, and other public and private nondefense users. These activities experienced difficulties in obtaining power and electron tubes over a period of time because order M–17 did not provide any limitation on the acceptance of rated orders for these products. Accordingly, BDSA order M–17 has been revised to include power and transmitting electron tubes under the order to alleviate these difficulties. The amended order was issued on September 4, 1959.

*Proposed revision of direction 4 to BDSA regulation 2*

A proposed revision of direction 4 to BDSA regulation 2 has been prepared and circulated among interested Government agencies for their comments and recommendations. This direction would authorize manufacturers of listed electronic items to deliver such items against rated orders in advance of the sequence of deliveries provided in the regulation. The proposed revision would also expand this list of electronic items for the purpose of alleviating difficulties in deliveries being encountered in obtaining engineering samples and small quantities for essential programs. The proposed change is designed to provide assistance to research and development activties being conducted for defense purposes.

*Steel strike*

During the month of June 1959, BDSA prepared detailed information relating to those steel mills which would not be affected by the then proposed steel strike. This information is available for use when necessary to increase defense set-asides and change leadtimes under the DMS to support military and atomic energy programs. Agreement was reached with the Department of Defense to issue, if required, spot delivery directives to support high priority programs on the Department of Defense "Master Urgency List" (these programs include missiles and satellites and are designated by the Department of Defense as "Brick Bat" and "Cue Cap").

Since the beginning of the strike BDSA has been assembling weekly reports on the impact of the steel strike on the general economy. It has in readiness a warehouse regulation which would reserve a portion of distributors' steel stock for defense and atomic energy orders should warehouse inventories decline sufficiently to make such action necessary. As soon as the strike is ended BDSA will issue instructions to insure an orderly return to full operation consistent with giving preference to defense orders in scheduling production. The details of these instructions will be developed in cooperation with the Department of Defense and the Atomic Energy Commission.

The steps taken by BDSA to assure availability of complete information regarding steel supplies and the effect on defense and atomic energy programs during the continuation of the strike are described below:

(1) On July 20, 1959, BDSA held a meeting with representatives of the steel distributing (warehouse) industry, as a result of which BDSA has been receiving weekly reports concerning steel warehouse stocks.

(2) Arrangements were made with the Bureau of the Census to provide BDSA with special periodic reports on steel imports. Under strike conditions steel imports are a much more important factor in the supply situation than they are normally.

(3) On July 24, 1959, a letter signed by the Administrator of BDSA was sent to the 110 steel companies still operating, reminding them of their obligations under the defense materials system with respect to preferential treatment in filling orders for controlled materials for Department of Defense and Atomic Energy Commission programs, under the authority of the Defense Production Act of 1950, as amended. Each letter was accompanied by a copy of DMS regulation 1, "Basic Rules of Defense Materials System" and BDSA order M–1A (iron and steel) which are currently applicable to the steel industry.

(4) On July 23, 1959, a telegram was sent to the 98 operating steel producers having current production directives under the defense materials system, requiring them to submit to BDSA weekly telegraphic reports on the acceptance of authorized controlled material orders. The first reports were received on July 27, 1959, covering acceptances of such orders as of the close of business July 24, 1959. Subsequent reports covering weekly acceptances of ACM orders at the close of business each Friday have been received each Monday thereafter.

The July 23d telegram also required each operating steel producer to report the tonnage of defense orders accepted by the company for each of the months of September, October, and November of each steel product on the company's current production directive. This information was received on July 27, 1959. Each company to which the July 23d telegram was sent is also required to report to BDSA immediately any shutdowns due to work stoppage of any of the company's plants which were operating on July 24, 1959.

(5) Informal meetings were held with representatives of the steel distributing industry on August 24 and September 15, 1959. The warehouse representatives supplied BDSA with current information on their stocks of steel and defense order impact, at these meetings.

*Copper strike*

The copper industry has been affected by strikes which started on July 31 and have spread to other locations in the intervening weeks. Approximately 75 percent of mine production, 90 percent of smelter production, and 70 percent of refinery production is presently closed down. Since refineries are the last step in production of marketable shapes, an estimate of loss of 91,250 tons of refined copper through September 11 is the best measure of net impact on consumers. To date, there is no evidence of adverse effect on deliveries of copper for defense-production purposes.

### SPECIAL ASSISTANCE FOR MILITARY AND ATOMIC ENERGY PROGRAMS

In order to assure the performance of defense and atomic-energy contracts on schedule, BDSA provides special assistance to defense and atomic-energy contractors and their suppliers when required. This special assistance includes improvement of deliveries of particular items and materials by the issuance of special priorities or directives to assure adequate deliveries of items or materials to fulfill defense and atomic-energy contracts. In addition, this Agency serves as an allotting agency under the defense-materials system to authorize privately financed construction projects sponsored by the Department of Defense and projects connected with the Canadian military and atomic-energy programs. In this connection BDSA issues allotments of controlled materials to the contractors involved and authorizes them to use ratings and program identifications in placing their orders for products and materials to fulfill such projects.

During the year ending September 30, 1959, BDSA provided special assistance on 2,820 cases as summarized below:

*Report of special-assistance actions for the year ending Sept. 30, 1959*

| | Cases | Dollar value |
|---|---|---|
| Directives and DX ratings: | | |
| Department of Defense [1] | 1,525 | $141,034,143 |
| Atomic Energy Commission | 57 | 611,703 |
| Canadian | 42 | 313,007 |
| All others | 14 | 0 |
| Total | 1,638 | 141,958,853 |
| Priorities (DO rating): | | |
| Canadian | 347 | 55,628,679 |
| Foreign | 7 | 27,578,628 |
| Private (D program) | 18 | 34,863,043 |
| Total | 372 | 118,070,350 |
| DMS (controlled materials): | | |
| Canadian military | 12 | 241,023 |
| Canadian atomic energy | 0 | 0 |
| DMS (controlled materials)—Continued | | |
| Foreign (munitions list) | 2 | $100,560 |
| Foreign mutual assistance | 0 | 0 |
| Defense sponsored (D program) | 8 | 68,249 |
| Total | 22 | 409,832 |
| Interim actions (M-41) | 777 | 0 |
| Allocation and production directives | 11 | 0 |
| Total [2] | 788 | 0 |
| Grand total [3] | 2,820 | 260,439,035 |

[1] Includes 472 cases for which no dollar value was available for the following reasons: (a) Interim actions and time extensions due to delay for various design changes, engineering, and production problems on newly developed products; (b) requests by DOD and AEC to change delivery sequence of scheduled orders.
[2] Allocation and production directives do not carry dollar value.
[3] Estimated. Since this report covers the period ending Sept. 30, 1959, the volume for the last month was arrived at by using ½ of the 1st 2 months of the 3d quarter.

The above figures reflect a decrease of approximately 15 percent in the number of cases but an increase of nearly 50 percent in dollar value as compared to the year ending October 1, 1958, when 3,333 cases having a dollar value of $129,388,871 were processed. The increase in dollar value is due primarily to construction projects authorized under the aircraft program (MAP). The decrease in the number of cases is attributed to various reasons such as decreased need for production and allocation directives and interim changes to the numerical preference list on machine tools; easing of tight supply in a number of areas, and the authority to the Department of Defense to apply the DX rating to contracts for the missiles and satellite programs.

The programs which currently require special assistance are missiles and satellites, construction, and Canadian defense (military and AEC) involving improved deliveries of scientific instruments, electronic equipment, and electrical equipment.

*Compliance and enforcement*

Disposition of cases presently in the hands of U.S. attorneys will substantially conclude the special compliance and enforcement program which was undertaken initially to put an end to black-market operations which flourished during the period of nickel shortage occasioned by heavy demands of the defense program. Most of the pending cases reflect priorities violations which took place during 1954–55. Only one case remains for transmittal to the Department of Justice.

In Los Angeles the U.S. District Court for the Southern District of California recently disposed of a case in which the defendants had been charged with the unlawful acquisition and disposition of nickel by permitting withdrawal of guilty pleas previously entered and acceptance of pleas of nolo contendere. In 8 other cases the U.S. attorney filed original informations containing 10 to 24 counts which charged 14 defendants with priorities violations.

Three cases are pending in the office of the U.S. attorney for the eastern district of New York. The U.S. attorney expects to present two of them to a grand jury at once. In a case pending in the office of the U.S. attorney for the southern district of New York, the U.S. attorney expects to proceed by information shortly. Two cases are being reviewed by the Criminal Division of the Department of Justice.

This year has witnessed a further increase in the activities of the compliance and enforcement staff in obtaining compliance with mandatory reporting requirements under the Defense Production Act. Information is continuously required from industry in carrying out BDSA's defense mobilization responsibilities.

In some 150 cases the BDSA compliance investigators have made followup calls, in person or by phone, in order to speed the return of overdue mandatory reports. In securing compliance with reporting requirements, admonitory letters and the use of investigators have generally sufficed and it has not been the practice to resort to formal legal action under section 706 of the Defense Production Act.

### PRODUCTION-CONTROL SYSTEM FOR EMERGENCY MOBILIZATION

As a result of experience and the various studies of supply, stockpile, total requirements and industrial capacity, BDSA is formulating a system of controls, regulations, and orders to be instituted at Presidential direction in an emergency. The basic framework of this system is now in being in the form of the defense materials system. The expansion of this system, when required, can be accomplished readily. Collateral orders under study and development will be instituted if needed to augment the basic allocation program to cover materials and products not available in required quantities during an emergency.

As the result of a policy recommendation made by BDSA and approved by the Director of ODM, approximately 2 years ago, BDSA prepared standby emergency regulations and delegations designed to meet the exigencies of a major nuclear attack upon the United States. These emergency documents were modified for use during Operation Alert 1958, and, during May 1959, they were printed for distribution to the members of the BDSA National Defense Executive Reserve. Copies of these printed pro forma emergency regulations and delegations have been provided to the committee. For purposes of Operation Alert 1959, these emergency documents were further modified and published in the Emergency Federal Register for use during that exercise. These emergency standby documents will be stored at each of the eight OCDM regional offices as well as at the National Relocation Center to serve as the basis for initial action in support of essential production and service activities in the event of attack.

*BDSA emergency delegation 1*

In order to assure the ability of the Government to implement these emergency standby regulations and delegations in an attack situation and to provide authority for the exercise of the other mobilization functions delegated to the Administrator of BDSA, BDSA emergency delegation 1 was issued on June 24, 1959, providing that in the event of attack upon the United States the powers and authority of the Administrator of BDSA are delegated to each regional production director of BDSA, for exercise within his region, such powers to be exercised only during such periods of time as communications between the regional production director and the national headquarters of BDSA or its successor agency are inoperative. The delegation further provides that in the event that there is no regional production director of BDSA in any one or more of the eight OCDM regions the delegated authority shall be exercised by the Assistant Director for Resources and Production of OCDM for such regions until a BDSA regional production director is appointed.

This emergency delegation has been published in the Federal Register, made public by a press release and supplied to the assistant directors for resources and production of each of the eight OCDM regional offices. The issuance and publication of this emergency delegation establishes standby authority which would become effective automatically for regional accomplishment of emergency actions in the event of an attack upon the United States should the national headquarters of BDSA become inoperative.

More than 1,000 members of BDSA's Executive Reserve have filed affidavits and completed the other administrative actions required to permit them automatically and immediately to become full-time Government employees in the event of an attack on the United States. The emergency delegation carries authority to redelegate the powers to the surviving members of the BDSA Executive Reserve who would be converted to a trained on-the-spot production and materials staff prepared to carry out the planned emergency actions.

### SURVIVAL-ITEMS PROGRAM

The survival-items program is designed to provide for the availability, in the event of an attack upon the United States, of the required quantities of those items considered to be essential to the maintenance of life. Comprehensive

national studies of the items designated as "survival items" are required to determine production capability and supply, requirements under attack conditions, and remedial measures to alleviate indicated deficiencies in supply. Of the several hundred survival items named, approximately three-fourths come under the jurisdiction of BDSA.

BDSA has completed 131 surveys covering the producers of survival items. Also, utilizing the facilities of the Census Bureau, wholesale inventories of these items have been determined by a series of surveys covering eight different wholesale-trade areas. Hence, the statistical activity to determine supply and production capability has been largely completed. The results of these surveys have been incorporated in electronic computer tapes by the National Damage Assessment Center and printouts covering a majority have been issued. A complete set of the printouts will be available at all OCDM regional offices.

Currently underway, or planned, are surveys covering: (1) Producers of glass and metal food and medicinal containers; (2) inventories of survival items held by water and sewerage utilities; (3) communications services; (4) transportation services. Completion of supply-requirements studies covering survival items will undoubtedly point up other areas, including alternate items which will have to be surveyed.

BDSA collaborated with HEW in supply-requirements studies covering 98 medical survival items. Supply data were assembled covering production, civil defense stockpiles, inventories in the hands of manufacturers, wholesalers and hospitals, and imports. Estimated postattack supply and production capability were related to postattack requirements in the studies to determine deficiencies. A number of remedial actions have been explored to alleviate deficiencies, such as increasing wholesale and retail inventory levels, barter of surplus agricultural products, recommendations to increase civil defense stockpiles, etc. These studies are continuing in the health area and similar supply-requirements studies will be made covering survival items in each of the other areas, namely: Water and sanitation; emergency housing; light, power, and fuels; body protection and household operations.

### CONTINUITY OF THE NATIONAL INDUSTRIAL PLANT

This program is designed to afford American industry with information on the effects of nuclear weapons and to assist industry in planning so as to minimize weapons effects on postattack production capability. Emphasis of the program should now be concentrated in the field of producers of survival items.

The Business and Defense Services Administration continued to counsel industry on dispersal matters in conjunction with the plant location counseling services of the Office of Area Development.

BDSA was assigned the responsibility under Defense Mobilization Order I–19 (January 1956) for "providing guidance and assistance to departments and agencies of the Federal Government, to industry, public and private persons, and organizations in the application of the dispersion policy."

In this counseling, BDSA's objective is to secure the greatest relative security of location within the particular local market area selected. This approach permits the natural functioning and growth of urban market areas and does not force regional decentralization. In order to accomplish this objective, the Office of Area Development advises on the dispersion adequacy of specific sites from population and industrial concentrations, and obtains a further determination from the Department of Defense of the dispersion adequacy of specific sites from major military installations and key industrial facilities.

Under present dispersal policy, the distance of a new facility from potential target and destruction areas is still regarded as a major factor in reducing the risk of attack damage to such facility. The determination of an appropriate dispersal distance affording the greatest degree of relative safety is decided on a case-by-case basis, with due consideration given to the various factors referred to above.

A map indicating the 52 urban target areas for purposes of the national industrial dispersion program was included in the eighth annual report (p. 195). There has been no change in this list.

During the calendar year 1958 the Office of Area Development provided dispersion advice to private industry, Government agencies, and others on 243 sites as follows:

| | |
|---|---|
| Private industry[1] | 130 |
| Government facilities | 46 |
| Government emergency relocation sites | 67 |
| Total | 243 |

[1] Includes 9 certificate-of-necessity cases.

From January 1, 1959, to September 15, 1959, BDSA has provided dispersion advice on 94 sites as follows:

| | |
|---|---|
| Private industry[1] | 87 |
| Government facilities | 5 |
| Government emergency relocation sites | 2 |
| Total | 94 |

[1] Includes 11 certificate-of-necessity cases.

### IDENTIFICATION AND RATING OF INDUSTRIAL FACILITIES OF PRIME IMPORTANCE TO THE NATIONAL DEFENSE

The Industry Evaluation Board was established January 6, 1951, under NSC directive, and its function was reaffirmed by Executive Orders Nos. 10421 dated December 31, 1952, and 10438 dated March 13, 1953. Under this authority, the Secretary of Commerce has the responsibility for identifying those products, services, and their supporting facilities which are of exceptional importance to industrial mobilization and national survival. This responsibility is carried out for the Secretary within the Business and Defense Services Administration by the Industry Evaluation Board, an interdepartmental organization chaired by the Department of Commerce and having as members, in an advisory capacity to the Chairman, the Departments of Defense, Interior, Agriculture, Labor; the Atomic Energy Commission; and the Office of Civil and Defense Mobilization.

The major output of the Board consists of a series of analyses of products and services selected through the application of criteria which attest to their essentiality and criticality. Those products and services which come within the purview of the Board cover the entire range of the industrial economy of the United States, from raw materials through end products, including the producing equipment and intermediate materials and components. The analyses demonstrate the importance of their respective subjects to national defense and survival, enumerate the producing plants, list relevant information and statistical data concerning them, and indicate the importance of each plant to total national capability to produce the subject analyzed. A single analysis may cover a large industrial segment involving several hundred producers; and entire service industry with many contributing facilities; or it may be limited to a single strategic item, or to a small specialized component, produced by one manufacturer.

By authority of the Executive order any group of industrial experts within the Federal Government may be called upon to prepare and present to the Board an IEB analysis, but inasmuch as the BDSA is responsible in the field of mobilization preparedness for the major portion of the industrial segments of the national economy, the Industry Divisions of this Agency contribute by far the largest number of analyses for Board action.

The completed analyses are designed to afford maximum utility to programs concerning industrial mobilization, whether related to accelerated economic warfare, limited wars and conflicts, or a general war with attack upon the United States. They provide officials operating in the various mobilization and defense programs concise and accurate summaries of the industries vital to the security of the Nation. The analyses are designed to show why these industries are essential, what industries the product analyzed depend upon, and how they enter into the chain of production towards the ultimate military, defense-supporting, or essential civilian end products.

IEB documents constitute a unique repository of pertinent information on those products, services, and facilities upon which the national defense and survival depend. Programs which utilize the IEB materials are concerned with such matters as: (*a*) Plans for continuity of industrial management, records, and production; (*b*) the reduction of vulnerability through plant protection, plant dispersal, etc.; (*c*) stockpiling; (*d*) production expansion; (*e*) civil defense activities; (*f*) postattack damage assessment and restoration; (*g*) essential survival-item production; and many others.

Since the Board's inception each of the member agencies, and other agencies which have been specifically approved by the Director of the Office of Civil and Defense Mobilization to receive IEB materials, have used the documents issued by the Board in their respective spheres of responsibility on a continuing basis. In addition, the analyses have on occasion been employed in policymaking deliberations and in providing information to high levels of government. During the past year the Departments of Agriculture and Labor have, by invitation of the Secretary of Commerce, become full participating members of the Board.

The analyses developed or revised during the past 12 months cover some of the most important segments of American industry, including areas in the basic and unusual metals, chemicals, automotive, and equipment industries. In a number of instances segments of an industry particularly important to national defense interlock to give a concise view of the most important aspects of the parent industry. Coverage of the communciations field was virtually completed with the issuance of a detailed analysis on domestic telegraphy.

Because of the very close relationship among industrial production, mobilization, civil defense, and other phases of national defense, the IEB Chairman and staff have continued to participate in conferences and consultations on such problems, and have contributed to the preparation of reports and the development of projects, in other offices and agencies.

### ASSESSMENT OF POSTNUCLEAR ATTACK PRODUCTION CAPABILITY

The assumptions made as to availability of vital civilian and military production immediately after a nuclear attack on the United States, and at various stages thereafter, are of critical importance to strategic military plans. These assumptions are also essential to preattack calculations of inventory, stockpiling and other methods of provision for civilian and military survival. Nuclear attack introduces into such computations a fundamental distinction, which has not been present in previous wars, between surviving capacity and the production obtainable from that capacity. Due to the break in the chain of suppliers to producers, production will be substantially less than availability capacity.

As stated last year, a study is being carried out which holds important implications for military and civil defense current procurement and forward planning, by a Government-Industry Task Group for Post-Attack Production established by the Business and Defense Services Administration. Cooperating with BDSA in this project are DOD, OCDM, AFSWP, HEW, AEC, the fire department of New York City, and other agencies and private companies. In developing the effect on end item production from breaks in the chain of supply the study takes account of interruptions in transportation, power supply, communications, and other basic services, and also of the direct effect of an attack on the labor force and the community services required for surviving labor and management to carry out their production responsibilities. To assure realism and validity, the problem is being approached through a carefully selected group of case studies for a small number of products, with full participation of responsible company management. Agreement has been reached with six participating companies to do pilot studies on antibiotics, surgical instruments, food pack cans, central office dial switching equipment, and a product of the Atomic Energy Commission. These pilot studies have been initiated to test the fundamental assumptions and the development of a generalized pattern for estimating manufacturing capacity following a mass nuclear attack.

The significance of fire and fire storm resulting from a nuclear attack on surviving industrial capability appears to be of increasing importance. In order to obtain more accurate concepts and measures of fire spread, a special technical subcommittee on nuclear fire spread has been established. The subcommittee is proceeding initially with a case study of the New York metropolitan area. Subcommittee representatives are from the Business and Defense Services Administration, U.S. Forest Service, the Armed Forces Special Weapons Project, the New York City Fire Department, the New York Board of Fire Underwriters, and the National Board of Fire Underwriters.

### RAPID TAX AMORTIZATION

Section 168 of the Internal Revenue Code of 1954 provides for the issuance of certificates of necessity for the rapid amortization of facilities to be used to produce new or specialized defense items or to provide research, developmental

or experimental services during the emergency period for the Department of Defense or the Atomic Energy Commission. The Director of the Office of Civil and Defense Mobilization is the certifying authority and the final responsibility for the administration of the program rests with the Director.

In the administration of the program, the Office of Civil and Defense Mobilization requests the BDSA to review and make recommendations on all requests for rapid amortization involving facilities intended for the production of materials and products under BDSA's jurisdiction. The industrial knowledge and experience of the staff of BDSA is utilized in connection with matters relating to a determination of the adequacy or availability of existing facilities and such recommendations have a significant bearing on the final determination made by the Director of OCDM.

The restrictive provisions of the latest amendment to section 168 of the Internal Revenue Code has caused a considerable diminution in the number of requests for rapid amortization. However, a constant number of new cases are filed and considerable time and effort is expended on post-certification actions such as time extensions, scope amendments, etc.

Insofar as is possible, BDSA maintains a current record of new production capacity obtained through this incentive.

During the year ending September 30, 1959, BDSA reviewed and considered approximately 100 new requests for certificates of necessity and 108 post-certification cases.

### SUPPLY-REQUIREMENTS STUDIES AND FACTS FOR EMERGENCY DECISION

BDSA has recently completed a revision of a supply-requirements study establishing levels of essential civilian and defense-supporting products and materials for a wartime economy.

These studies in general determine the feasibility of providing the logistics support for the strategic military plan for limited war and form the basis for determining strategic stockpile levels. Studies of industrial, military, and essential civilian production and construction give us statistical facts for the administration of title I of the Defense Production Act during a war emergency period. Specific components of a critical production and supply nature are studied from time to time at the request of and in collaboration with AEC, DOD and OCDM.

After consultation with industry and interested Government agencies, a mandatory survey was conducted of the production of electronic end equipment with the mailing of form BDSAF–539, "Electronic End Equipments Survey," to 550 firms having 1,200 establishments. In addition, a survey of the production of microwave components (questionnaire form BDSAF–541) by 145 establishments was undertaken. These surveys gathered data on military and nonmilitary shipments in 1958, in units and dollars, and unfilled military orders and inventories of certain equipments as of December 31, 1958. The information collected by these surveys will be used: (1) To provide comprehensive data on 1958 shipments of a specified list of electronic end equipments and microwave components; (2) to provide a basis for relating mobilization requirements to current production levels and maximum mobilization capacity; (3) to identify product areas in which potential mobilization shortages might develop; (4) to improve the assessment of bomb damage in the event of enemy attack, and to enable planning to be done for the resumption of the production of essential electronic end equipments thereafter; and (5) to determine the resources available to meet the requirements for emergency radio communications.

Jointly with the Electronics Production Resources Agency of the Department of Defense, BDSA is continuing to conduct semiannual surveys of production capabilities for military electronic parts. During the past 12 months the survey covered capacitors, resistors, transformers and reactors, relays, quartz crystals, electron tubes, semiconductor diodes and rectifiers, and transistors. These products were treated by detailed subcategories representing unique production processes, and data were collected on military and nonmilitary shipments in units and dollars, military and nonmilitary unfilled orders in units and dollars, and maximum mobilization capabilities for military and nonmilitary production. Information on industry's capacity to produce key electronic components has proved indispensable in the preparation of the supply-requirements studies required of the Agency.

A mandatory survey of the capacity of production of stainless steels and high-temperature steels, including molybdenum metal, titanium, and zirconium, was completed. This survey, made for the first time, collected information on capacity and capability of vacuum melting and induction melting furnaces, as well as rolling mills. In addition, capacity surveys were completed of the closed die forging and of the open die forging industries.

In the area of chemicals and related products, detailed supply-requirements studies were completed or are underway on the following defense significant items: Hydrogen peroxide, fluorine, perchlorates, oxygen, nitrogen, hydrazine, UDMH, nitrogen tetroxide, sodium borates, boric acid, phosphorus, ammonia, lithium chemicals, and argon.

### RECOMMENDATIONS CONCERNING THE NATIONAL STOCKPILE OF STRATEGIC AND CRITICAL MATERIALS AND RELATED ACTIVITIES

BDSA reviews the essential civilian and war-supporting demand picture on materials in the national stockpile, programs for upgrading and disposition, purchase specifications, storage practices, diversion of shipments and the results on the stockpile of technological obsolescence. Current holdings and purchase commitments for stockpile and the DPA inventory are about $8 billion. New developments in materials research, technological improvements in weapons, as well as changing strategic military concepts make the management of this huge national asset of growing importance to the Nation.

During the year activity in reviewing essential civilian and war-supporting requirements for strategic materials in a mobilization period reached a record level and at the same time much work was done in collateral fields. Some 83 basic data studies were completed, including 71 out of 75 materials listed as stockpile items. In addition, about 40 reports were prepared which covered special aspects of stockpiling, such as purchase specifications, disposal programs, storage procedures, usage developments, and diverse materials situations.

As required by OCDM and on a continuing semiannual basis, a special study was also made of the supply-requirements potential of 28 special property and high-heat alloy materials which by reason of technological developments could be subject to a larger than currently expected wartime demand.

Much of the above activity was stimulated by the establishment of new stockpiling policy by the Office of Defense Mobilization on June 30, 1958, elements of which made necessary the early revision of all stockpile objectives and required increased activity in other fields.

The most significant development in policy was the reduction of the assumed mobilization period from 5 years to 3 years with the consequent lowering of most stockpile objectives. As a consequence, surpluses were generated for a large number of materials. The emphasis in activity changed from one of procurement to planning for disposal of surpluses resulting from the reduction and to upgrading stockpile materials to more advanced forms consistent with versatility of use. The importance of the latter grows as plans to provide against destruction of facilities by a nuclear weapon attack on the country are developed. In both these fields, BDSA can expect greater activity than heretofore in preparing recommendations for OCDM and GSA.

BDSA participated strongly in the development of OCDM policy with respect to disposal programs and has made a number of recommendations regarding various programs as well as procedures under which they should be carried out. In this respect, legal simplification of disposal requirements is considered desirable and has been the subject of BDSA recommendations. In addition, during the year, analyses were made of the market situation for a number of commodities including a number of those excess to defense needs and obsolescent and off-grade items. These analyses are complex and take into account the interests of producers, consumers, the economy of the country and international relationships. If and when the disposal procedures required by law are improved, management of these surpluses can be more effectively carried out.

A summary of BDSA activities follows:

*Estimate of mobilization requirements*

Studies of essential civilian and war-supporting requirements completed during the year are listed below. In a number of cases, estimates of supply to be expected in a mobilization period were included.

Abaca
Alumina (non-metallic uses)
Aluminum
Aluminum floride
Aluminum oxide
Antimony
Asbestos, amosite
Asbestos, chrysotile
Asbestos, crocidolite
Beryl
Bauxite, non-metallic uses
Bauxite, metallurgical grade
Bismuth
Cadmium
Carbon electrodes
Celestite
Chrome metal
Chromite, chemical grade
Chromite, mettalurgical grade
Chromite, refractory grade
Cobalt
Coconut oil
Columbite
Copper
Cryolite
Diamond, crushing bort
Diamond dies, small
Diamond, industrial stones
Feathers and down
Fluorspar, acid grade
Fluorspar, ceramic grade
Fluorspar, metallurgical grade
Graphite, Ceylon
Graphite, Madagascar
Graphite, other
Graphite electrodes
Hyoscine
Iodine
Lead
Magnesium
Manganese metal
Manganese ore, battery grade
Manganese ore, chemical grade, type A
Manganese ore, chemical grade, type B
Manganese ore, metallurgical grade
Manganese, synthetic dioxide
Ferromanganese, high carbon
Ferromanganese, medium and low carbon
Silico-manganese
Mercury
Mica, Muscovite block and film
Mica, Muscovite splittings
Mica, phologopite splittings
Molybdenum
Nickel
Opium
Palm Oil
Platinum metal, iridium
Platinum metals, palladium
Platinum metals, platinum
Pyrethrum
Quartz crystals
Quinidine
Rubber
Rutile
Selenium
Shellac
Silicon carbide
Silk, raw
Silk, waste and noils
Sisal
Talc, block steatite
Tantalite
Tantalum
Tin
Titanium sponge
Tungsten
Vanadium
Vegetable tannin, chestnut
Vegetable tannin, quebranco
Vegetable tannin, wattle
Zinc
Zirconium.

The supply-requirements position of the following materials was examined for possible deficits in a mobilization period in light of a growing usage for high heat alloy and other special property purposes.

Amonium perchlorate
Beryl
Boron
Cerium
Cesium
Chromium
Cobalt
Columbium
Hafnium
Hydrazine
UDM haydrazine
Gallium
Germanium
Graphite, artificial sp. grades
Indium
Lithium
Liquid oxygen
Molybdenum
Nickel
Potassium perchlorate
Red fuming nitric acid
Rhenium
Silicon
Strontium
"Thiokol" polysulphides
Tantalum
Vanadium
Zirconium

*Revision of purchase and acceptance specifications*

Stockpile purchase specifications are established to assure adequate quality for efficient wartime use and longtime storage. Generally with industry advice, revised specification recommendations have been provided for the following:

Asbestos, amosite
Asbestos, crodidolite
Copper, oxygen free
Diamonde, industrial stones
Ferromanganese
Ferrovanadium
Mercury
Ruthenium
Shellac
Tantalite
Tantalum metal (non-capacitor grade)
Tungsten carbide powder

*Disposal programs*

As required by administration policy and stockpiling legislation, sales of surplus materials must be made with due regard for producers, consumers and national interests. Using these criteria, BDSA guidance to OCDM or GSA was developed for the following:

| | | |
|---|---|---|
| Chromite (off grade) | Kyanite (low grade) | Rubber |
| Copper | Magnesium scrap | Titanium (low grade) |
| Cryolite, synthetic | Pyrethrum | Vanadium pentoxide |
| Graphite (subspecification) | | |

*Storage procedures*

After consultation with industry recommendations to OCDM on storage procedure revisions included the following:

| | | |
|---|---|---|
| Low carbon ferrochrome | Manganese (battery grade) | Selenium |
| Castor oil | | Sperm oil |
| Coconut oil | Molybdic oxide | Rutile |
| Corundum | Palm oil | Zirconium ores |

*Other activities and reports*

*Abaca and sisal.*—A further study was made with other agencies of rotational problems with regard to hard cordage fibers.

*Copper.*—An analysis was made of the supply and demand for refined copper scrap and copper base scrap together with scrap generation. This study was used in revising the copper basic data for a mobilization period.

*Hyoscine.*—A study of potential substitutes for hyoscine was prepared to determine the essentiality of hyoscine for a mobilization period.

*Nickel.*—As recommended by the Department of Commerce late in 1958, OCDM authorized continued diversion to industry of nickel scheduled for shipment to the Government under Defense Production Act contracts during 1959. By reason of ample commercial stocks no sales of premium price nickel were made to industrial users and shipments to the DPA inventory of such nickel continued. However, in mid 1959, GSA was able to make arrangements with the International Nickel Co. to cancel further shipments of market price nickel under the DPA contract. The latter case was settled by payment of the premium to the company in the form of nickel oxide sinter (at market value) from surplus stocks in the DPA inventory. Thus, the Government was saved a payment of $25 million for 26 million pounds of nickel which would have been surplus to defense needs.

Improvement in industrial consumption of nickel during the first half of 1959 permitted the sale of all nickel oxide and nickel oxide sinter produced by the Nicaro plant and halted further increases in the DPA inventory of this material during this period.

*Selenium.*—An analysis of end use consumption of selenium from 1952 through 1958 was made for the purpose of improving estimates of mobilization requirement.

*Propellants.*—A preliminary summary of the supply-requirements relationship for liquid oxygen was forwarded to the Joint Committee on Defense Production. Further refinement and analysis will be made to determine if the indicated slight deficit is valid. In addition, a brief summary of the supply-requirements balance for the more important propellant fuels was prepared for this committee.

*Titanium.*—The customary semiannual survey of requirements for titanium for commercial and for military "13" products was completed.

*Zirconium.*—A forecast of essential civilian requirements for reactor grade zirconium, 1959 through 1965, was completed.

## THE EXECUTIVE RESERVE PROGRAM

Under the mobilization readiness program for executive manpower established under the authority of the Defense Production Act, as amended, BDSA as the production agency for a war emergency has recruited and designated more than 1,000 reservists out of an authorized complement of 1,500. These reservists stand ready to become part of the BDSA staff at regional or national headquarters, when called, or at local emergency centers in the event of a nationl catastrophe. They are being kept informed and briefed on mobilization production plans and in current mobilization responsibilities. The program of re-

cruitment has been developed to assure a greater degree of geographical dispersion of the reserve force. Regional production offices have been established and equipped with adequate records.

As of September 30, 1959, BDSA's executive reserve program stood as follows:

| | |
|---|---|
| Authorized complement | 1,500 |
| Statements of understanding filed | 1,260 |
| Executive reservists formally designated | 1,068 |
| Security certifications in process | 192 |

The following table shows the number of reservists by OCDM regions:

| OCDM region: | *Number of reservists* | OCDM region—Continued | *Number of reservists* |
|---|---|---|---|
| 1 | 284 | 6 | 36 |
| 2 | 317 | 7 | 75 |
| 3 | 69 | 8 | 24 |
| 4 | 213 | | |
| 5 | 50 | Total | 1,068 |

*Sources of recruitment*

While candidates for the national defense executive reserve are selected from all segments of the civilian economy, BDSA necessarily recruits from manufacturing, business, and some of the professions. Candidates are drawn from large, medium, and small business and generally are persons who have a record of executive ability. (See exhibit A.)

*Delegation of responsibilities*

As central direction may not be possible in a general war, the BDSA Administrator has delegated his responsibilities to the BDSA regional production directors in case communications with national headquarters become disrupted. This delegation of authority provides that each regional production director will exercise within his region control of the producton, distribution, and use of most materals and facilities. The emergency delegation carries with it the power of redelegation and is part of the BDSA plan to make its executive reserve operationally effective in the event of attack. The emergency delegation was published in the June 27, 1959, Federal Register.

*Processing*

In order to avoid the confusion and delays (or perhaps temporary impossibility) of personnel processing after an attack on the United States, BDSA—the only Government agency to do so—has given its reservists provisional postattack appointments. Reservists have signed regular appointment affidavits and have been given a notification of personnel action that will put them on the payroll immediately after they report for duty at an emergency operating center, without further paperwork. (See exhibits B and C.) At the time of reporting for duty, reservists will decide whether they wish to serve with or without compensation.

*Operational aids*

To further the efficient management of BDSA's responsibilities in a general war, BDSA reservists have been armed with documents that will make them operationally effective at their local emergency operating centers all over the country. A postattack responsibilities card gives them travel priority and sets forth responsibilities which they will assume whenever their locality is out of communication with regional or national headquarters. (See exhibit D.) A postattack manual gives them detailed instructions on their duties in such a situation. (See exhibit E.) They also have been furnished a progress report on the survival items program and supplement I to the postattack manual.

*Training*

The first all-BDSA Executive Reserve Conference was held in Washington on May 12 and 13, 1959. (See exhibits F and G.) More than 800 persons attended, about 600 of whom were reservists. The first day's activities consisted of general sessions devoted to the overall mobilization program. On the second day, each of the 25 BDSA industry divisions held detailed briefing sessions for its reserve members. This national training session was supplemented by meetings in the regions to reach reservists who could not attend the Washington conference. In the past year, executive reserve sessions have been held in Seattle, San Francisco, St. Paul, Cleveland, Detroit, Atlanta, Los Angeles, and Salt Lake City.

PROGRAMS COOPERATIVELY CONDUCTED WITH OCDM

*Program to provide operational capability at the regional level*

It has become increasingly apparent that mobilization plans must include provision for autonomous operations at the regional level in a national emergency and, in fact, for the conduct of national operations from regional sites under extreme circumstances. To provide the operational capability required at the regional level to meet this situation, BDSA has taken the actions described below:

1. *Establishment of procedure for automatic activation of the BDSA executive reserve in an emergency.*—During the year BDSA established a procedure (described under the executive reserve program) for the automatic activation of its executive reservists in an emergency. There were also issued to the reservists a postattack manual containing instructions on their duties in such a situation, and a postattack responsibilities card which provides travel priority and indicates responsibilities of the reservist. With the issuance of these documents the BDSA executive reserve has been organized into an effective instrument for use in a national emergency.

2. *Establishment of BDSA regional mobilization files.*—There has been established at each of the eight OCDM regional offices, BDSA files of mobilization information to provide the essential working data that would be required for emergency operations. A library of trade directories and technical publications has also been established at each regional office. This material will provide the working tools required by the BDSA regional production director, OCDM regional personnel and BDSA executive reservists to discharge their responsibilities.

Operational capability at the regional level requires, in addition to the above measures, the appointment of BSDA regional productional directors for each of the eight OCDM regions. These men, who would be thoroughly versed in all phases of mobilization programs and operations, are essential to provide: (1) Emphasis and continuity to our current programs at the regional and local levels; (2) well-informed and effective liaison with the OCDM regional offices; (3) leadership, coordination, and technical knowledge of the production agency's operating plans and responsibilities in an emergency situation.

*Operation Alert 1959*

The purpose of Operation Alert 1959 was to provide training in, and testing of, Civil Defense and Defense Mobilization plans and programs at all levels of Government. The exercise consisted of the following phases: (1) Civil Defense alert exercise, April 17–18; (2) local phase, May 8–9; (3) State phase, June 4–5; (4) regional phase, July 8–10; (5) national relocation exercise, August 24–26; (6) evaluation phase, August 27–28. BSDA participation was limited to the regional phase, the national relocation exercise and the evaluation.

For use in the regional phase, BSDA developed production and supply data on a regional basis for 53 survival items included in the exercise. The eight Commerce field office managers, who represent BSDA on the regional Civil and Defense Mobilization Boards, presented the data during the exercise and otherwise represented BDSA in discharging the responsibilities of the industrial production agency. Observers from BDSA headquarters were present at four OCDM regions during the regional exercise.

During the national relocational exercise, BDSA had representation at the Housing and Home Finance Agency and Department of Health, Education, and Welfare relocation sites to collaborate with those agencies in considering problems arising from the exercise and working relationships in an emergency situation. BDSA representatives at the OCDM national relocation site discharged the agency's responsibilities during the national phase and participated in the interdepartmental discussions of regional and national problems which arose, as well as in the evaluation of the exercise.

As principal emphasis was placed upon region, State, and local phases of the exercise, there was less participation by BDSA personnel than in previous years. However, experience in dealing with mobilization problems was provided for a number of personnel who had previously not participated in Operations Alert.

*National plan for civil defense and defense mobilization*

The Director of the Office of Civil and Defense Mobilization issued the national plan for civil defense and defense mobilization in October 1958 together with annex 41 which summarizes 40 annexes to be developed and issued in support and elaboration of the basic national plan. The national plan serves as the basis for

civil defense and defense mobilization planning by the States, local governments, and the public and as the general planning direction with which Federal emergency planning must be compatible. BDSA has drafted several of these annexes covering the areas of responsibility assigned to this agency. These drafts are in various stages of completion due to revisions required as a result of interagency review and recommendations received. In addition, BDSA has reviewed and commented on a number of annexes drafted by other agencies covering activities assigned to them.

*Executive orders*

BDSA is responsible for a wide variety of defense mobilization programs under delegation from the Secretary of Commerce who in turn derives his authority for these activities by delegation from the Director of the Office of Civil and Defense Mobilization under appropriate Executive orders. For the purpose of providing a more precise delineation of the defense mobilization responsibilities of the several departments and agencies the Director of OCDM had prepared for the President a series of new Executive orders designed to establish the defense mobilization planning responsibilities of the heads of these agencies. None of these Executive orders has been issued because of adjustments required as a result of interagency review.

MISCELLANEOUS PROJECTS

*Machine tool program*

*Administration of Order M–41*

During the latter part of the year, the Department of Defense requested that BDSA review BDSA Order M–41: Metalworking Machines—Delivery, giving particular attention to the necessity of continuing the numerical preference list sections of the order. In a communication dated June 3, 1959, the DOD suggested that "because of the small number of deliveries of metalworking machines for rated orders" it is recommended that the numerical preference list be placed in standby condition and that appropriate changes be made in order M–41.

Subsequently, BDSA has had several discussions with representatives of DOD and industry representatives and a comprehensive review is being made of order M–41 from the standpoint of trying to accommodate, if possible, the recommendation of the DOD.

The numerical preference list was revised during October 1958 and July 1959; 725 copies of each revision were sent to the DOD and approximately 400 of each revision were forwarded to the builders of machine tools.

*Management of defense mobilization production equipment inventory*

During the period, discussions were held with the Maritime Administration relating to their segment of the Defense Mobilization Production Equipment Inventory. The Maritime Administration stated that they have reviewed their inventory in relation to ODM Order VII–4 and it was their opinion that their shipyard tools should not be considered as "idle production equipment" but rather as a standby line.

BDSA is planning to hold discussions with OCDM and the Maritime Administration on the standby line interpretation and at the same time undertake a thorough review of the production equipment of the Maritime Administration. As of September 30, 1959, the Maritime Administration's inventory consisted of 958 items valued at $2,853,817.

During the year, there were 63 deletions and 37 additions to the General Services Administration's segment of the inventory. As of September 30, 1959, this segment contained 549 items having an acquisition value of $8,825,580.

There were three deletions from the Atomic Energy Commission's segment during the period. The present inventory consists of 49 items having an acquisition value of $1,927,304.

*M-day machine tool trigger program*

As of September 30, 1959, 83 machine tool builders are participating in the first phase of the M-day machine tool trigger program. These 83 contracts cover about 14,675 general purpose machine tools, having the value of $219,971,398.

During the year, there was a slight decrease in the number of participating companies resulting from cancellations and rejections of contracts. In all but

one instance the cancellations resulted from mergers or amalgamations and the parent company has assumed contractual responsibility under the program.

During the period, BDSA undertook its annual review of the program and discussions were held with 55 contractors. As a result of these discussions 35 contracts were amended to reflect current company production capabilities and mobilization requirements. It was determined that 12 contracts required no revision; discussions are continuing with the other 8 companies.

Discussions will commence with the 28 contractors whose contracts were not reviewed during the past year.

*Management of facilities expansion programs*

1. *The Korean pool order program.*—The Korean pool order program has been completed with the exception of 13 items which remain unsold. The company that built the 13 items under the program has stated that they will be able to sell the items to industrial concerns, and thus the sales contract has been extended to June 30, 1960.

The Korean pool order program covered 112 machine tool contracts placed with machine tool builders calling for the production of 94,225 machine tools with a contractual value of $1,425 million. At the time of the termination date of the original contracts, only 5,281 machines were undelivered and became a liability to the Government. Subsequently, the BDSA and the GSA, working very closely with and receiving the utmost cooperation from the machine tool industry, has been able to sell or declare excess 5,268 items. The Government's liability under this program, as of September 30, 1959, consists of the 13 items involved, valued at $112,063.

2. *Facilities lease contracts program.*—BDSA, working closely with the GSA, made excellent progress during the period in closing out the facilities lease contracts program. The program covered 123 facilities lease contracts involving 22,352 machine tools, valued at $31,320,259. As of September 30, 1959, only 2 contracts remain active covering 31 items, valued at $689,539.

During the year, the GSA, concurring with BDSA recommendations, terminated 7 contracts. Of the two contracts still active, one was extended because of hardship on a month-to-month basis for a period not to exceed 2 years. The remaining contract contains three 1-year renewal options which have been exercised. The termination date of the contract is June 15, 1960.

*Establishment of a survival, rehabilitation and reconstruction inventory of machine tools and related production equipment*

During the year, meetings were held with OCDM to discuss the proposal to transfer the management of the National Industrial Equipment Reserve from the DOD to the Department of Commerce. OCDM suggested that the Department of Commerce submit formal comments on this proposal giving particular emphasis to the planning for a reserve of machine tools for rehabilitation and reconstruction. On May 28, 1959, we submitted our formal recommendations on the proposal. In the communication it was pointed out that some revision of Public Law 883 would be necessary to effect the transfer of the management responsibilities to the Department of Commerce.

Subsequently, OCDM requested that we undertake to develop the necessary revision of Public Law 883 as a basis for further discussions of the proposal. This program is underway with the objective of obtaining OCDM concurrence and the necessary Bureau of Budget approval prior to the next opening of Congress.

*Inspection and evaluation of Government-owned machine tool*

During the period, BDSA reviewed 110 excess personal property lists covering 25,721 machine tools. Numerous discussions were held with the DOD in regard to the disposal of the items and, when appropriate, discussions were held and comments received from machine tool builders. During the period, BDSA recommended that a number of the tools be transferred to the National Industrial Equipment Reserve in order to provide the productive facilities for defense-supporting and survival and rehabilitation programs in the event of a national emergency.

During the period, BSDA has been following carefully the program of the U.S. Army Ordnance Department to dispose of machine tools held in reserve for the production of certain types of shells which are determined not to be needed under future programs. As a result of these plans of the U.S. Army Ordnance Department, progressively larger quantities of presses are being

offered as excess. BDSA has had the opportunity of reviewing a few of these shell lines and has concluded that the presses, which represent the main items of equipment employed, are of special design and type and could not economically be modified for general metalworking operations. BDSA will study carefully the phasing out of this program from the standpoint of the surplus machine tools generated and discussions, when appropriate, will be held with both Government and industry representatives.

*The elephant machine tool program—enlargement of productive capacity*

Originally under the elephant tool program contracts were entered into with four machine tool builders with the objective of enlarging their productive capacity to build large (elephant) machine tools. Two of the contractors merged since the program was instituted with the parent company assuming the responsibilities for the two contracts.

During the year one of the contractors requested permission to purchase 44 items leased to it under this program. After a careful review of the factors involved, BDSA recommended to the GSA that the purchase request be approved.

As of September 30, 1959, 195 machine tools are on lease with these contractors, having a value of $4,971,528.

*The problem of military excess property disposal*

The large-scale procurement of military items of both specialized and general purpose nature over the past 9 years combined with the rapid changes in military technology and requirements has caused the generation of surplus property of virtually all types and descriptions in the hands of the Government. Constant pressure has been applied to the Nation's Military Establishment to rid itself of such surpluses both at home and overseas. To accomplish the reduction in inventory of these surplus goods, offerings are made to the public which in some instances create a deleterious affect on specific economic or industrial areas.

To minimize the economic impact of such proposals for sale on the business community the Business and Defense Services Administration maintain a constant review and study of the general and specific economic and industrial picture and in consultation with industry when appropriate recommends to the disposing department, office, agency, or command a course of action which in the judgment of BDSA would result in eliminating or at least softening the economic impact of the disposal action. In some instances, the BDSA requests the disposing agency to withdraw the item from sale temporarily, to reduce the quantity offered or to spread such sales over a greater period of time.

The great majority of disposal offerings are made in the United States. However, a considerable program is underway overseas the effect of which evidences itself in indirect impact on the foreign trade potential of American industry or upon domestic industry directly when such material is purchased with the intention of importing it into the United States for sale or use.

While these problems are only indirectly connected with the mobilization activities of BDSA the virility and strength of American industry and business is of genuine concern to us in our administration of the fundamental statutory functions of the Department, and in the maintenance of American industrial might to compete in the international economic cold war activity and to assure full industrial readiness to meet any other type of conflict.

*Heat treating facilities and missiles*

During recent months, the BDSA has had numerous discussions with representatives of the DOD concerning the research and development activities of that Agency in the field of heat treating for the missiles programs. The Air Force is recommending tax emortization certificates for specific firms active in the heat treating industry that have been selected by the prime contractor for research and development activities in connection with the missiles program.

Specifically, the problem is one of determining the availability of existing heat treating units to handle missile components of the size required for the program. The most recent meeting with the Air Force was held during the second week of September and BDSA was informed that the size of missile compenents were growing larger and that in all likelihood there would be an additional number of heat treating companies participating in the research and development activities through tax amortization certificates.

*Shell steel*

At the request of the Office of Chief of Ordnance, Department of Defense, BDSA made arrangements with three steel producers for delivery of approximately 1,200 tons of steel for the production of large caliber (8 inch) high explosive shells. This steel is of different specification than that used for this purpose in the past and is being investigated by the Department of Defense in trial production and tests. The tests being conducted are of particular interest since the successful use of this steel would result in a considerable financial advantage to the Government.

*Ferrous scrap*

At the request of OCDM a study was made at the end of 1958 of certain phases of the iron and steel scrap situation at that time. This request was the result of representations by scrap dealers' trade associations that decreased use of scrap by the steel-producing industry was jeopardizing the future status of the scrap collecting and processing industry and would thus have a harmful effect in future defense emergencies.

A study of mobilization requirements for ferrous scrap and pig iron was submitted to OCDM. This study was made on the basis of stated mobilization requirements, as well as in terms of full use of steelmaking capacity.

*Helium and argon*

The increasing use of helium gas by the military and other government consumers was the principal reason for a shortage of helium over the past year. In order to provide for the most essential needs, BDSA investigated approximately 50 instances of industrial usage of helium and made recommendations of essentiality to the Bureau of Mines, which is the sole producer and original distributor of helium. With commencement of operations of a new plant at Keyes, Okla., helium supplies improved in August and September to a point reaching approximate balance. During the shortage BDSA was active in helping unsupplied helium consumers find sources for alternate gases, principally argon.

*Rocket propellant studies*

On request of the Joint Committee, BDSA submitted summaries of existing and planned production potentials concerning 10 chemical propellant materials. The studies revealed the availabilities of the propellants in comparison to defense and civilian requirements under current conditions and also under full mobilization. In addition, the structure and geographic distribution of each producing industry was described. The summaries showed surpluses in supply of some items and a few potential deficits based on presently visualized capacities. Inasmuch as the data used in the reports are based on (1) industry decisions regarding construction of new facilities, and (2) DOD and NASA programs, both of which are subject to variations, the supply-requirements studies will require periodic reviews.

*Fluid power study*

During the year, BDSA has spent a considerable amount of time on a survey of the fluid power industry. This has been done under authority of the Defense Production Act as a mandatory survey. It represents a report of shipments, capacity, and metal consumed for all the members of the industry. The report is broken down into four parts showing value of shipments and types of systems, value of shipments by end use and maximum capacity, specifications or types of equipment shipped, and materials consumed during 1957 in the manufacture of fluid power systems equipment (by shapes and forms). Through this report, BDSA will have complete knowledge of the geographical location, also the manufacturers of the various types of equipment, the particular types of equipment manufactured by each, and the end use, broken down as industrial, airborne, marine and ordnance, and mobile. The value of this information in the event of an emergency is obvious. The returns have been slow in submission, principally because this is in reality a new industry as such, and BDSA had no complete and accurate knowledge of who manufactured this equipment prior to this survey. However, the returns are practically complete as of now and tabulation of the information reported is underway. As a result of this survey, when the information is tabulated, a new IEB study on this important industry will be prepared. Further, as a result of this survey, the industry has entered into an exhaustive program of approved definitions of fluid power terms. This is a subject which is of extreme importance to many of our industries who are

lacking in a clean definition of the industry and in the terms used in the industry, which could be very confusing in time of emergency.

*Material consumption studies*

In an effort to keep current on the requirements of controlled materials of large producers for both civilian and military production needed in time of mobilization, BDSA is conducting a series of studies designed to provide accurate and current information regarding material consumption and requirements. These reports keep BDSA current on production mix which changes quite frequently and thus enables BDSA to make a more efficient and speedy allocation of controlled materials as necessary in time of emergency.

*Export problems*

Export problems have ceased to exist as far as the need for controls on commodities and materials for short supply reasons are concerned. However, surveillance over nickel, diamond bort and powder, and ferrous scrap was maintained during a part of the year covered by this report.

*Import problems*

BDSA representatives have participated in activities in connection with investigations under section 8 of the Trade Agreements Act to determine whether imports of certain commodities are threatening to impair the national security. The commodities involved during the period of this report were heavy electrical equipment, fluorspar, tungsten, cobalt, wool knit gloves, and steam turbine generators.

*Small arms and ammunition survey*

BDSA is currently making a study of the domestic small arms and ammunition industry. The purpose of this study is to determine whether domestic production of small arms and ammunition declined because of the alleged impact of two classes of surplus arms, namely, (1) used military guns which have been purchased by private persons from foreign governments and imported into the United States for resale, and (2) used U.S. military guns declared surplus by the Department of Defense and sold to the public in the United States.

The military has suspended sales of used guns pending the outcome of this study. The industry, on June 29, 1959, filed a request with OCDM for an investigation under section 8 of the Trade Agreements Act.

*BDSA meetings*

| | |
|---|---|
| **Industry advisory committees:** | |
| Oct. 21, 1958 | Railway Supply IAC. |
| Oct. 22, 1958 | Aircraft Producers IAC. |
| Oct. 29, 1958 | Small Arms Manufacturers IAC. |
| Jan. 27, 1959 | Aluminum Products IAC. |
| Jan. 27, 1959 | Prime Aluminum Products IAC. |
| June 23, 1959 | Ferrous Scrap IAC. |
| **Task groups:** | |
| Oct. 15, 1958 | Sisalana and Abaca Stockpile TG. |
| Nov. 19, 1958 | Soft Fibre TG. |
| Dec. 18, 1958 | Small Arms Manufacturers TG. |
| Feb. 3, 1959 | Mobilization Controls TG. |
| Mar. 25, 1959 | Water Use Data TG. |
| Apr. 16, 1959 | Mobilization Controls, Steel Industry TG. |
| Apr. 22, 1959 | Silk, Silk Waste and Noils TG. |
| May 27, 1959 | Disposal of Surplus Government Stockpiled Coconut Oil TG. |
| June 3, 1959 | Sisalana and Abaca Stockpile TG. |
| Sept. 10, 1959 | Fibre Can and Tube TG. |
| **Special conferences:** | |
| Apr. 6, 1959 | Special Conference on Revision of Proposed DMS Regulations, Electronics Industry. |
| Apr. 6, 1959 | Special Conference of West Coast Commercial Air Transport Manufacturers. |

*BDSA meetings*—Continued

Special conferences—Continued

| | |
|---|---|
| Apr. 7, 1959 | Special Conference on Revision of Proposed DMS Regulations, Aluminum Industry. |
| Apr. 8, 1959 | Special Conference on Revision of Proposed DMS Regulations, Nickel Alloys Industry. |
| Apr. 14, 1959 | Special Conference on Revision of Proposed DMS Regulations, Aircraft Industry. |
| Apr. 21, 1959 | Special Conference on Revision of Proposed DMS Regulations, Copper Industry. |
| Apr. 23, 1959 | Special Conference on Revision of Proposed DMS Regulations, General Industry Group. |

## EXHIBIT A

## WHAT IS THE BDSA EXECUTIVE RESERVE?

### SOME QUESTIONS AND ANSWERS ABOUT THE BDSA NATIONAL DEFENSE EXECUTIVE RESERVE

1. Q. What is Business and Defense Services Administration (BDSA)?

A. The Business and Defense Services Administration is a key agency in the U.S. Department of Commerec that deals with the peacetime problems of the industrial segment of our national economy and has specific industrial mobilization responsibilities in peacetime and in national emergencies. (See Annex I.)

2. What is the National Defense Executive Reserve (NDER) Program?

A. The NDER Program, in which BDSA has a major part, is a mobilization readiness program for executive manpower established under the authority of the Defense Production Act, as amended, and Executive Order No. 10660 on February 15, 1956. Its purpose is to provide for the training of persons selected to serve the Government in key civilian positions at local, regional, or national headquarters during periods of national emergency. (See Annexes II and III.)

3. Q. Why was the program necessary?

A. Several times within the last 30 years the Government has been forced by war emergencies to expand its civilian staff very substantially. Each time it has had to turn to nongovernmental sources for additional executive talent. All of these expansions were accomplished largely by improvisation and without advance planning. It became clear, in the light of the possibility of a sudden emergency of unprecedented magnitude, that the methods of the past are totally inadequate for meeting the Nation's requirements promptly and adequately.

4. Q. Who administers the program?

A. The Director of the Office of Civil and Defense Mobilization (OCDM) administers the program and utilizes the services of other departments and agencies in its development. Among his responsibilities are: (1) Coordinating the activities of other agencies in establishing units of the Reserve; (2) providing for appropriate standards for recruitment and training; and (3) issuing necessary rules and regulations in connection with the program.

5. Q. Have any other departments or agencies been authorized to participate in this program?

A. Yes. On February 23, 1956, Defense Mobilization Order I–21 (DMO I–21) authorized departments and agencies having major mobilization responsibilities to establish units of the NDER, to select and designate members of such units, and to institute programs for their training. The Department of Commerce is one of the agencies so authorized. Recruitment of Reservists by BDSA, a primary organization unit of the Department, is directed toward staffing an emergency production agency.

6. Q. How are Executive Reserve candidates selected?

A. They are selected from all segments of the civilian economy, such as manufacturing, business, transportation, the professions, and labor. Qualified persons from the business and industrial segment are invited by the BDSA Administrator to participate in the program.

7. Q. How many persons will participate in the Executive Reserve Program?

A. Legislation places no limit on the number of persons to participate in the program. The strength of the program will depend on such elements as the availability of qualified executives and identification of functional assignments. It must be remembered that DMO I–21 provides that the number of Reservists shall be limited to that for which there is a demonstrable need in essential mobilization functions.

8. Q. What type of personnel is recruited for the BDSA Reserve?

A. Generally, persons who have a record of executive ability in production or business are chosen. The types of assignments in times of emergency would normally be those requiring a high degree of managerial ability and reasonable flexibility on the part of the Reservists to accommodate themselves to unusual work demands. Although prior experience in governmental activities is advantageous, it is not a prerequisite. Reservists should be old enough to be seasoned and not too old to stand the pace of emergency operations.

9. Q. What is the procedure for applying for membership in the BDSA Reserve?

A. The applicant should submit to BDSA a brief biographical statement of his employment background, emphasizing any executive industrial experience which would be of value to an emergency production agency.

10. Q. If extended an invitation, must the recipient become a Reservist?

A. No. The person invited may not so wish, or his employer may decline to permit him to join.

11. Q. Is security clearance required?

A. Yes. Candidates must be cleared for security by the Government before designation as Reservists. Fingerprinting is included.

12. Q. Is a written agreement required of prospective BDSA Reservists?

A. Yes. Reserve candidates must sign the following Statement of Understanding and have it approved by their employers, if any:

*As an Executive Reservist in the Department of Commerce, I accept the following responsibilities:*

*I. In time of Peace or International Tension I agree to:*

*(1) Maintain close liaison with the part of the Government to which I am assigned.*

*(2) Attend called training meetings or courses whenever possible.*

*(3) Attend war games or exercises where possible.*

*(4) Participate in the review of mobilization plans and programs.*

*II. Time of Limited War:*

*a. I agree to be immediately available for full-time employment through the Department of Commerce unit of the National Defense Executive Reserve in the event of full mobilization without attack on the United States. (1) It is understood that as a Reservist I may not be able to accept a call for full-time employment under conditions such as:*

*(a) Change in status within my own organization.*

*(b) Change in personal conditions.*

*(c) Overriding needs for my assignment to some other activity either within or without my own organization.*

*b. I agree to be responsible for keeping the Department of Commerce informed whenever I foresee any reason for not being able to serve.*

*III. In Time of General War: I agree to be immediately available for full-time employment through the Department of Commerce unit of the National Defense Executive Reserve in the event of attack on the United States.*

*IV. Compensation: In time of peace or international tension, I agree to serve as an Executive Reservist and hereby agree to waive any and all pay or compensation for such service for myself, heirs, and assigns. In time of limited war, I shall have the option of serving with compensation from the Government or on an uncompensated basis (with continued receipt of compensation from my private employer) provided that legal authority for such service then exists. In the event of general war, I shall have the option of serving with compensation from the Government or on an uncompensated basis (with continued receipt of compensation from my private employer) pending the establishment of regular personnel procedures for the emergency.*

13. Q. What evidence does a candidate receive indicating that he has been accepted as a BDSA Reservist?

A. After he has been properly qualified and cleared for security, he receives a formal Certificate of Designation issued by the Secretary of Commerce on the recommendation of the BDSA Administrator.

14. Q. What other documents will he receive?

A. He will receive documents that will permit him to be effective in his community immediately following an attack. These are:

(*a*) Appointment Affidavits to be signed by the Reservist and returned to BDSA.

(*b*) Notification of Personnel Action to be kept by the Reservist. This provisional appointment with become effective (1) upon proclamation of a civil defense emergency or upon an attack on the Unted States and (2) upon his reporting for duty at an emergency operating center. The Reservist will decide at that time whether he wishes to serve without compensation or as a paid employee.

(*c*) Civil defense identification card.

(*d*) Post-Attack Responsibilities card, which assigns responsibilities to the Reservist.

(*e*) Post-Attack Manual, which gives detailed instructions.

15. Q. What will the training program consist of?

A. It will include such things as orientation sessions, continuous and up-to-date information on the Government's mobilization organization, program, and plans, and such other activities as will keep the Reservist fully abreast of developments affecting the ability of the United States to mobilize its resources.

16. Q. How much time each year will participation require?

A. Possibly two briefing sessions a year of usually one but not more than two days each. This is the only "away from the desk" time anticipated. The bulk of the time is spent in reviewing material sent to the Reservist through the mail.

17. Q. Will BDSA Reservists be trained for specific mobilization assignments?

A. Initially, no. They will be trained for assignments to positions in general mobilization functional areas rather than for specific jobs. This approach appears to be most feasible in order to avoid the need for constantly revising manning tables as the status of Reservists changes. A degree of earmarking of jobs will have to be resorted to, but all trainees in a general mobilization area will be briefed on all foreseeable matters which they would be required to handle.

18. Q. Does a BDSA Reservist receive compensation while in training?

A. No. At present, the BDSA Reservist serves without compensation.

19. Q. How does service as a Reservist differ from service as a WOC employee under section 710(b) of the Defense Production Act?

A. The main differences are these:

(1) In his capacity as a member of the National Defense Executive Reserve, the Reservist may only receive training for future assignments in key positions in the event of an emergency such as full mobilization and may not advise, consult, or act on any matter pending before any department or agency of the Government. Within certain limits, WOC employees under section 710(b) not only can, but are expected to advise, consult, or act on matters pending before the Department.

(2) Reservists are not required to file statements concerning their financial interests. Employees under section 710(b) must file statements concerning their financial interests.

20. Q. Are Reservists subject to so-called conflict-of-interest laws?

A. A Reservist, other than a full-time Government employee, is exempted by Executive Order from sections 281, 283, 284, 434, and 1914 of Title 18, United States Code, and from section 190 of the Revised Statutes (5 U.S.C. 99) while engaged in training activities. These do not involve his advising, consulting, or acting in any matter pending before Government agencies or departments.

21. Q. Can a WOC consultant be a BDSA Reservist?

A. Yes. However, persons currently employed as WOC consultants would not ordinarily be designated as Reservists until completion of their tours of duty.

22. Q. Can a person have dual status as an Executive Reservist and a military reservist?

A. Generally, yes. However, obligations of members of the military Ready Reserve normally would preclude a candidate's designation as a BDSA Executive Reservist.

23. Q. How are excessive demands on a single employer avoided?

A. Each department and agency is responsible for avoiding the issuance of invitations to persons already in the Reserve and for avoiding excessive demands on a single employer. To assist the departments and agencies in this responsibility, the Civil Service Commission maintains a central register of

Reserve members. Each department notifies the Commission of persons designated as members of the Reserve.

24. Q. Where would a BDSA Reservist be assigned to serve in a Korean type of emergency?

A. In all likelihood, those Reservists serving the Government would be assigned to duty at national headquarters of the emergency production agency.

25. Q. Where would a BDSA Reservist be assigned in the event of an attack on the United States?

A. He would report to the nearest emergency operating center, offer his services, and request that his availability be made known to the OCDM Regional Office. He would remain in his local community until specifically directed to report elsewhere.

26. Q. If a BDSA Reservist finds he can no longer continue in the Executive Reserve but wishes to make himself available at some future time, what steps must he take?

A. He should notify the BDSA of this fact. Names of such persons will be kept in a future reference file.

27. Does a BDSA Reservist file a new Statement of Understanding if he: (*a*) Changes jobs in his company, (*b*) becomes self-employed, or (*c*) goes to another company?

A. No to (*a*) and (*b*). Yes to (*c*). His new employer would have to consent to his participation in the Executive Reserve. In the event of any employment status change, however, notification should be sent to the BDSA so that appropriate corrections to records may be made.

June 1959.

## ANNEX I

### BUSINESS AND DEFENSE SERVICES ADMINISTRATION MOBILIZATION RESPONSIBILITIES

BDSA is responsible for the production resources of the Nation in the event of national emergency. As the nucleus of an emergency production agency, it serves as the delegate agency of the Office of Civil and Defense Mobilization with responsibility for achieving maximum utilization of the production resources of the Nation to meet any type of national emergency. Administration of priority powers assists in assuring completion of current military and atomic energy programs of production and construction. Authority for BDSA to allocate materials in the civilian economy is currently included in the Defense Production Act when certain conditions exist. BDSA is charged with the responsibility of assisting and encouraging industry to develop plans and programs to insure the continuity of essential production in the event of a general war and massive nuclear attack on this country.

The following programs are conducted with the objective of developing maximum readiness to meet the demands on industry resulting from either a limited war or a general war with nuclear attack on the United States:

*1. Administration of title I of the Defense Production Act (as amended)*

Title I of the Defense Production Act of 1950, as amended, authorizes the President to compel the acceptance and performance of defense contracts (Department of Defense, Atomic Energy Commission, and other defense programs) by the use of priority powers. By delegation, BDSA administers this authority through a series of orders and regulations titled the Defense Materials System (DMS). Programs such as Intermediate Range Ballistic Missiles (IRBM), Intercontinental Ballistic Missiles (ICBM), or Satellite, as designated by the President, are accorded super-priority treatment to insure their taking precedence over other defense programs. In addition to insuring that current defense production and construction remain on schedule, the DMS provides a working system for use in promptly and effectively controlling the Nation's economic resources in the event of war.

*2. Recommendations concerning the national stockpile of strategic and critical materials*

BDSA reviews the complete supply-demand picture on stockpiled materials, programs for upgrading and disposition, purchase specifications, storage practices, diversion of shipments, and the results on the stockpile of technological obsolescence.

*3. Survival items program supply studies*

Comprehensive national studies of the availability of survival items (175 out of the total 225 are under BDSA jurisdiction) are undertaken through a series of surveys at the manufacturers, wholesale, and retail levels. These studies of supply form an indispensable basis for the OCDM actions on the national survival item stockpile procurement program.

*4. Protection and continuity of the national industrial plant*

This program is designed to provide American industry with information on the effects of nuclear weapons and to assist industry in planning so as to minimize weapons effects on postattack production capability. Emphasis of the program must now be concentrated in the field of producers of survival items.

*5. Identification and rating of industrial facilities of prime importance to the national defense*

The Secretary of Commerce has the responsibility of establishing security ratings for industrial facilities based upon their relative importance to national defense. This responsibility is carried out by the Industry Evaluation Board in BDSA through the review and analytical efforts of the industry divisions. The results of these identifications form the basis for many nonmilitary defense activities including industrial defense, reduction of vulnerability, counter subversion, physical plant protection, and the like.

*6. Assessment of industrial production capability in the event of enemy attack*

In cooperation with other agencies (Atomic Energy Commission, Department of Defense, Armed Forces Special Weapons Project, Department of Health, Education, and Welfare) and selected industries, BDSA is studying the effects of enemy attack on end-item producers (containers, dynameters, antibiotics), their chain of suppliers of materials and components. The studies of the vertical chain in the production process afford a more realistic picture of the results of an attack on production capability and provide a measure of the difference between surviving potential capacity and actual capability of production.

*7. Expansion goals and rapid tax amortization*

Although the rapid tax amortization program is now restricted to new or specialized defense items and national defense research, the number of new cases on which BDSA's comments and recommendations are requested (concerning the adequacy or availability of existing facilities) continues. Post-certification requests, such as time-extension amendments, continue as well. BDSA's industry divisions receive semiannual reports from industry on the progress toward completion of certified facilities and maintain a current record of new production capacity obtained through rapid tax amortization incentives.

*8. Supply-requirements studies, components studies, and facts for emergency decision*

These studies determine the feasibility of providing the logistics support for the Strategic Military Plan for limited war and form the basis for determining strategic stockpile levels. Studies of industrial, military, and essential civilian production and construction give BDSA statistical facts for the administration of Title I of the Defense Production Act during an emergency period. Specific components of a critical production and supply nature are studied from time to time at the request of and in collaboration with the Atomic Energy Commission and the Department of Defense.

*9. Production controls system for mobilization including preparation of standby orders and regulations*

This is a program for the development of standby regulations, orders, and procedures designed to create regional and local mobilization capabilities throughout the Federal governmental levels. It conforms with the review and revision of all basic national mobilizational plans currently under way. The current program was initiated as a result of revised policy guidance established by the Office of Civil and Defense Mobilization, which places greater emphasis on the coordination of Federal nonmilitary mobilization planning with that of the State and local governments.

*10. Executive reserve program*

BDSA, as the production agency for an emergency, has over 1,000 designated Executive Reservists and has been authorized to recruit up to 1,500. Reservists stand ready to become a part of the staff, when called, and are kept informed and trained on mobilization plans and in current mobilization activities. Recruitment is designed to assure dispersion of the Reserve force to reduce losses due to attack. The establishment of regional production offices, on a standby basis, armed with adequate records, provides the opportunity to assign centers closer to the Reservists so that each Reservist can report and ready himself to assist in the national effort.

## ANNEX II

### DEFENSE PRODUCTION ACT

#### SECTION 710(E)

The President is further authorized to provide for the establishment and training of a nucleus executive reserve for employment in executive positions in government during periods of emergency. Members of this executive reserve who are not full-time Government employees may be allowed transportation and not to exceed $15 per diem in lieu of subsistence while away from their homes or regular places of business for the purpose of participating in the executive reserve training program. The President is authorized to provide by regulation for the exemption of such persons who are not full-time Government employees from the operation of sections 281, 283, 284, 434, and 1914 of Title 18 of the United States Code and section 190 of the Revised Statutes (5 U.S.C. 99).

## ANNEX III

### EXECUTIVE ORDER 10660—PROVIDING FOR THE ESTABLISHMENT OF A NATIONAL DEFENSE EXECUTIVE RESERVE

By virtue of the authority vested in me by the Constitution and laws of the United States, including sections 703(a) and 710(e) of the Defense Production Act of 1950, as amended (50 U.S.C. App. 2153(a); 2160(e)), and as President of the United States, it is hereby ordered as follows:

Section 1. There is hereby established in the executive branch of the Government a National Defense Executive Reserve to be composed of persons selected from various segments of the civilian economy and from government to be trained for employment in executive positions in the Federal Government during periods of emergency.

Section 2. The Director of the Office of Defense Mobilization is hereby directed to institute and administer the Executive Reserve program; to coordinate the activities of other agencies in establishing units of the Reserve; to provide for aprpopriate standards of recruitment and training; and to issue necessary rules and regulations in connection with such program.

Section 3. The Director of the Office of Defense Mobilization in carrying out his responsibilities under this order may utilize the services of other departments and agencies in the maintenance of agency and centralized rosters and in the development training programs and materials.

Section 4. Heads of departments and agencies of the Government designated by the Director of the Office of Defense Mobilization, after appropriate consultation, are authorized to establish units of the Executive Reserve and to select and designate persons to serve as members of the units.

Section 5. Activities of persons by reason of designation as Executive Reserists under this order shall not include acting or advising on any matter pending before any department or agency but shall be limited to receiving training for mobilization assignments under the Reserve program. With respect to activities as so limited, reservists who are not full-time Government employees shall be exempt from the operation of sections 281, 283, 284, 434, and 1914 of Title 18, United States Code, and section 190 of the Revised Statutes (5 U.S.C. 99).

Section 6. The Director of the Office of Defense Mobilization shall report to the President annually, and at such other times as may be appropriate, on the progress made in the development and operation of the Executive Reserve program.

DWIGHT D. EISENHOWER.

THE WHITE HOUSE, *February 15, 1956.*

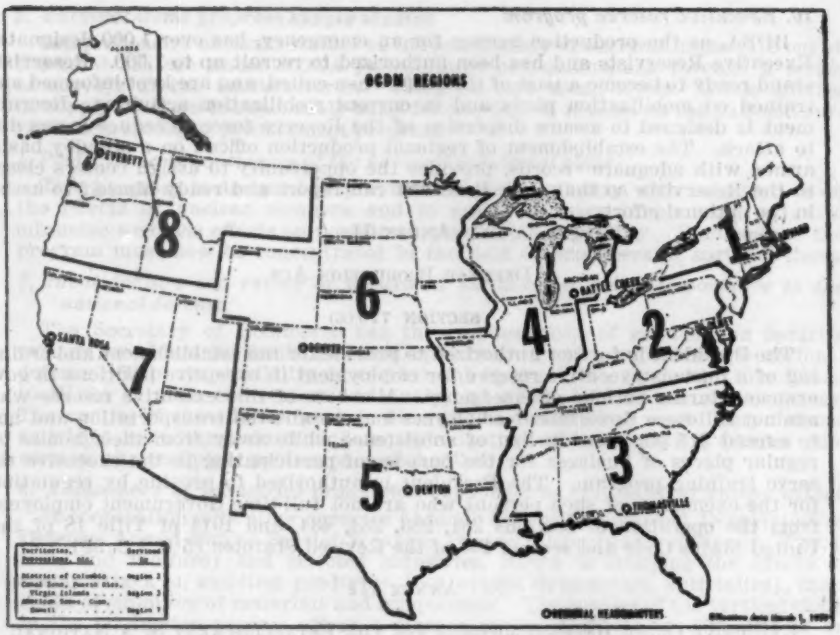
OCDM REGIONS
ALASKA
EVERETT
8
6
4
1
BATTLE CREEK
SANTA ROSA
7
DENVER
2
5
DENTON
3
FINDLAY
OFFICIAL HEADQUARTERS

EXHIBIT B

FORM GA-482
(6-9-53)

U. S. DEPARTMENT OF COMMERCE
BUSINESS AND DEFENSE SERVICES ADMINISTRATION
WASHINGTON 25, D. C.

## APPOINTMENT AFFIDAVITS

IMPORTANT.—*Before swearing to these appointment affidavits, you should read and understand the attached information for appointee*

SPECIMEN

I, ....., do solemnly swear (or affirm) that—

### A. OATH OF OFFICE

I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely without any mental reservation or purpose of evasion; that I will well and faithfully discharge the duties of the office on which I am about to enter, SO HELP ME GOD.

### B. AFFIDAVIT AS TO SUBVERSIVE ACTIVITY AND AFFILIATION

I am not a Communist or Fascist. I do not advocate nor am I knowingly a member of any organization that advocates the overthrow of the constitutional form of the Government of the United States, or which seeks by force or violence to deny other persons their rights under the Constitution of the United States. I do further swear (or affirm) that I will not so advocate, nor will I knowingly become a member of such organization during the period that I am an employee of the Federal Government or any agency thereof.

### C. AFFIDAVIT AS TO STRIKING AGAINST THE FEDERAL GOVERNMENT

I am not participating in any strike against the Government of the United States or any agency thereof, and I will not so participate while an employee of the Government of the United States or any agency thereof. I do not and will not assert the right to strike against the Government of the United States or any agency thereof while an employee of the Government of the United States or any agency thereof. I do further swear (or affirm) that I am not knowingly a member of an organization of Government employees that asserts the right to strike against the Government of the United States or any agency thereof and I will not, while an employee of the Government of the United States or any agency thereof, knowingly become a member of such an organization.

### D. AFFIDAVIT AS TO PURCHASE AND SALE OF OFFICE

I have not, nor has anyone acting in my behalf, given, transferred, promised or paid any consideration for or in expectation or hope of receiving assistance in securing such appointment.

..... .....
(Date of entrance on duty) (Signature of appointee)

Subscribed and sworn before me this ..... day of ..... A. D. 19.....,

at ..... .....
(City) (State)

[SEAL] .....
(Signature of officer)

.....
(Title)

NOTE.—*The oath of office must be administered by a person specified in 5 U. S. C. 16, or by a person designated to administer oaths under Section 305, Act of June 26, 1943, 5 U. S. C. 16a. If by a Notary Public, the date of expiration of his commission should be shown.*

USCOMM-DC 7245-P

## EXHIBIT C

Standard Form 50
Rev. July 1957
Promulgated by U. S. Civil Service Commission—FPM R-1

**NOTIFICATION OF PERSONNEL ACTION**

| 1. NAME (LAST [CAPS]—First—Middle—Mr.,—Miss—Mrs.) | 2. DATE OF BIRTH | 3. IDENTIFICATION (optional) |
|---|---|---|
| | | BDSA- |

4. THIS IS AN OFFICIAL NOTICE OF THE PERSONNEL ACTION DESCRIBED BELOW, WHICH AFFECTS YOUR EMPLOYMENT. GENERAL INFORMATION CONCERNING YOUR EMPLOYMENT APPEARS ON THE REVERSE SIDE OF THIS FORM.

| 5. NATURE OF ACTION (standard terminology must be used) | 6. EFFECTIVE DATE OF ACTION | 7. CIVIL SERVICE OR OTHER LEGAL AUTHORITY |
|---|---|---|
| Excepted Appointment | * | 50 App. USC.2293(f); FDSA Delegation #2, Sept. 8, 1954; 5 USC 1082 (28) |

| FROM— | | TO— |
|---|---|---|
| SPECIMEN | 8. POSITION TITLE AND NUMBER | Industrial Production Specialist |
| | 9. SERIES, GRADE, SALARY | $50.00 per diem WAE or WOC (at option of appointee on date of reporting) |
| | 10. NAME AND LOCATION OF OFFICE BY WHICH EMPLOYED | Business and Defense Services Administration<br>Emergency Operating Center (Classified) |
| | 11. DUTY STATION | |

| | 12. APPORTIONED POSITION | | |
|---|---|---|---|
| [ ] Yes | | [ ] Yes | [ ] Apportionment Waived |
| | | STATE: | [ ] Proved |

| 13. VETERAN PREFERENCE | | | | 14. TENURE GROUP | 15. POSITION OCCUPIED IS IN THE: | |
|---|---|---|---|---|---|---|
| No | 5-pt. | 10-pt. Disab. | 10-pt. Other | | [ ] Competitive Service | [X] Excepted Service |

| 16. APPROPRIATION | 17. PAYROLL DEDUCTIONS | | | 18. DATE OF APPOINTMENT AFFIDAVITS (accessions only) |
|---|---|---|---|---|
| From: | CSR | FICA | FEGLI | |
| To: | | X | | |

19. REMARKS.

[ ] a. Subject to completion of 1 year probationary (or trial) period commencing _____

[ ] b. Service counting toward career (or permanent) tenure from: _____

Separations: Show reasons below, as required. Check, if applicable: [ ] c. During probation [ ] d. From appointment of 6 months or less

*Item 6:

This appointment will become effective only (1) upon proclamation of a civil defense emergency or upon an attack upon the United States and (2) upon your reporting for duty at your assigned duty station.

Prior to the fulfillment of these two conditions you will not become an officer or employee of the United States.

To be filled in upon appointee's reporting for duty:

Date of reporting for duty: _____

Appointee's choice on compensation basis: WAE____ WOC____

| 20. EMPLOYING DEPARTMENT OR AGENCY | 22. SIGNATURE (or authentication) AND TITLE |
|---|---|
| Commerce | P. G. Asher<br>Director of Administration |
| 21. OFFICE MAINTAINING OFFICIAL PERSONNEL FOLDER (If different than Item 10, above) | 23. DATE: |

USCOMM.—DC

EXHIBIT D

**POST-ATTACK RESPONSIBILITIES**

NATIONAL DEFENSE EXECUTIVE RESERVE

U. S. DEPARTMENT OF COMMERCE
Business and Defense Services Administration
Washington 25, D. C.

**PRODUCTION**

EXHIBIT E

## EMERGENCY ASSIGNMENT

1. As a member of the Business and Defense Services Administration (Department of Commerce) unit of the National Defense Executive Reserve, you are a direct representative of the Administrator of BDSA, or its successor agency, in the performance of his functions under the Defense Production Act of 1950, as amended, and such other authority as may in an emergency be delegated to him.

2. In the event of attack on the United States which prevents communication (1) between you and the national headquarters of BDSA, or its successor agency, (2) between you and the regional production director of BDSA, or its successor agency, for the region in which you are located, and (3) between you and the regional director of the Office of Civil and Defense Mobilization, or its successor agency, for the region in which you are located, you will report to the Federal, State, or local government official having authority in the area in which you are located. You are hereby authorized to travel at such time at Government expense and be entitled to all priorities for travel, gasoline, etc., which may be provided for Federal employees.

3. Pending receipt of instructions from the regional director of OCDM, the regional production director of BDSA, or the national headquarters of BDSA, or successor agencies, you will utilize your industrial experience and managerial skills together with your Executive Reserve training to maximize human survival and to assist in the recovery of your community and country under the direction of the Federal, State, or local government official in charge.

Dated: May 11, 1959

H. B. McCoy, Administrator
Business and Defense Services Administration

Approved:

Leo A. Hoegh, Director
Office of Civil and Defense Mobilization
Executive Office of the President

THIS DOCUMENT is the property of the United States Government. Its counterfeiting, alteration, or misuse is a violation of section 499, Title XVIII, U.S.C. If found, drop in any mailbox. Return postage guaranteed. Return to Business and Defense Services Administration, U. S. Department of Commerce, Washington 25, D. C.

ISSUED TO: _____ No. C2-_____

_____
Bearer's Signature

## POST-ATTACK INSTRUCTIONS

1. Report to the nearest Civil Defense Emergency Operating Center.

2. Identify yourself as a BDSA Executive Reservist.

3. Request that your availability be made known to OCDM regional headquarters.

4. Pending receipt of instructions from national or regional headquarters of BDSA or regional headquarters of OCDM, or their successor agencies, assist in the recovery of your community and country in accordance with this emergency assignment.

5. Follow instructions and guidelines contained in POST-ATTACK MANUAL FOR BDSA EXECUTIVE RESERVISTS.

7118—U. S. Dept. of Comm—DC—1959

## Post-Attack Manual for BDSA Executive Reservists

### 1. INTRODUCTION

This manual is being distributed to provide general guidance to members of the BDSA Executive Reserve with respect to their responsibilities in the event of enemy attack on the United States. Should such an attack occur, conditions would be fundamentally different from any that have existed in human experience. Intense and vigorous efforts are being made to visualize the kinds of problems that would face the Nation. It is now felt that sufficient progress has been made in planning to meet post-attack production problems to permit the issuance of these instructions.

This guidance applies to the period immediately following an attack on the United States. To the extent that national and regional Federal Government organizations can function and communicate, direction to the Executive Reserve will be given in terms of the problems as they actually exist. This manual provides general guidance to assist Executive Reservists to contribute toward the achievement of Government objectives in the event that disruption of communications and transportation makes it temporarily impossible to make Federal Government direction effective. Under these conditions much must be left to the individual initiative and executive judgment of the Reservist. He must carry his "Post-Attack Responsibilities" card in his wallet and the contents of this manual in his head at all times.

Each Reservist will note that the whole approach to providing for effective utilization of our production resources differs radically from that which characterized past war emergencies. In addition to the familiar top priority accorded to the production of weapons needed to prosecute the war, there is added at a level of equal importance the use of resources required for human survival and the restoration of vital public utilities and services.

The BDSA Reservist must understand his role and his place in a post-attack government organization. The BDSA production Executive Reservist is charged with the responsibility of meeting needs by assisting in achieving maximum utilization of production resources. This manual provides general guidance with respect to the areas to which priority is to be given. In the civilian area, these are the rehabilitation of damaged survival item manufacturing plants, the delivery of production materials for the manufacture of survival items, and the restoration of public facilities. Within this group, however, there will exist many levels of relative urgency resulting from the varying effect an attack would have on different communities.

Decisions as to the relative urgency of need in a community must be made by the community government. The BDSA Reservist is to seek out the community government to ascertain civil defense and human survival needs and their relative importance. His basic job is to use his skill, experience, and knowledge to meet these needs as effectively as possible from available production resources.

To the extent that this immediate post-attack job is accomplished with effectiveness, it will lead to the maximization of human survival and shortening of the period during which national and regional direction is inoperative. At the end of this period the Reservist will receive specific directions from the Federal production agency to replace the general guidelines given him in this manual.

### 2. WHEN AND WHERE TO REPORT

Utilizing your travel authorization as required, report immediately, in person, without being called, to the nearest Civil Defense Emergency Operating Center. Inform the official in charge of your status as an Executive Reservist by presenting your "Post-Attack Responsibilities" card, and request that your availability be made known to the OCDM Regional Headquarters. The Civil Defense Emergency Operating Center will provide communications facilities and will be the central point for information and for coordination of area activities to cope with the effects of the attack.

### 3. DUTIES AFTER REPORTING

Pending receipt of instructions from the OCDM Regional Headquarters, you will be expected to advise and assist the Civil Defense Emergency Operating

Center concerning all production activities, including assessment and reporting of industrial damage and capability, industrial inspection and cannibalization, production expediting, materials distribution, and inventories.

#### 4. PRODUCTION POLICY FOR THE POST-ATTACK PERIOD

Your advice and assistance will be directed to the production and construction objectives and programs listed in Items (1) through (7), below. In the event that priorities and allocation powers and related authorities vested in the Administrator of BDSA (or its successor agency) are delegated to you, they shall be used for the same objectives and programs.

(1) Material required for the production of essential survival items set forth in the OCDM "Listing of Essential Survival Items."

(2) Equipment and supplies needed to maintain operations of essential services. These are: Transportation; communications; electric power; fuels; water and sewerage; hospital and health services; processing, storage and distribution of food; emergency shelter and community facilities; and maintenance and operation of essential Government services.

(3) Material required for the production of military items determined by the Department of Defense to be required to prevent further injury to the Nation and for retaliation against the enemy or for related purposes described below. Any actions on your part for this purpose would be responsive to specific requests made by representatives of the Department of Defense or the Atomic Energy Commission.

(4) Supplies and equipment needed to maintain Atomic Energy Commission operations and to meet requirements for the development and production of atomic weapons and of atomic materials and equipment needed for essential military purposes.

(5) Supplies and equipment required for the operation or construction of facilities required for production of survival and support items, urgent military and atomic energy production, and for the operation of essential services.

(6) Materials required for the production of supplies and equipment and construction of emergency facilities determined by the Regional Executives of the Office of Civil and Defense Mobilization as essential for civil defense purposes.

(7) Emergency programs authorized by policy determinations issued by the Office of Civil and Defense Mobilization.

#### 5. YOUR RELATION TO CIVIL DEFENSE OR OTHER STATE AND LOCAL AUTHORITY

The State and local governments or Civil Defense Emergency Operating Centers will direct the civil defense and defense mobilization activities within their jurisdiction and determine their requirements and the relative urgency of their requirements for the finished goods, such as survival items, which are needed to meet the emergency situation.

The Federal Government will assist the State and local governments or Civil Defense Emergency Operating Centers as soon as possible after the attack. You will use your Delegation of Authority, when issued to you, to assist in accelerating the operations of productive facilities and to assure maximum utilization of products and materials in the production process to meet local needs as determined by the Civil Defense Emergency Operating Center or other duly constituted authority. The responsibility for the distribution of the finished manufactured products rests with the local community government.

#### 6. EMERGENCY ACTIONS AND REGULATIONS RELATED TO PRODUCTION

It is planned to put the Emergency Regulations and Delegations named below into effect as required to meet the needs of the post-attack situation by National Headquarters of BDSA (or its successor agency) or by the BDSA Regional Production Representative if communications are disrupted. BDSA Regional Production Representatives have been provided with copies of the stand-by emergency regulations and have been delegated the authority, in the event communications are disrupted, to act for the Administrator and to exercise the priorities and allocations powers and related powers and authorities vested in him to carry out the basic policy described in Section 4 of this document.

Emergency Regulation 1—Ratification of Previous Actions of BDSA.

Emergency Regulation 2—Special Rules Applicable to Rated Orders and Authorized Controlled Material Orders.

Emergency Regulation 3—Self-Authorization Procedure for MRO and Capital Equipment Needed for Essential Facilities.

Emergency Regulation 4—Self-Authorization Procedure for Production Materials Needed for Production of Essential Products.

Emergency Regulation 5—Limitations on Shipments of Survival Items.

Emergency Delegation 1—Delegation of Authority to Regional Production Directors.

Emergency Delegation 3—Delegation of Additional Rescheduling Authority to the Secretary of Defense.

7. REPORTING TO THE REGIONAL OCDM OFFICE

When instructed to do so, you will report to the Regional OCDM Office. You will be expected to provide expert advice and assistance on production matters to the BDSA Regional Production Representative and the OCDM Regional Director, and will take actions under instructions of the BDSA Regional Production Representative. If communications with National Headquarters are disrupted, the BDSA Regional Production Representative will function under his emergency Delegation of Authority from the Administrator of BDSA with policy direction from the Regional Director of OCDM. If communications are not disrupted, the BDSA Regional Production Representative will carry out instructions received from National Headquarters and will cooperate fully with the Regional Director of OCDM.

W. C. TRUPPNER,
*Director, Office of Industrial Mobilization Business and Defense Services Administration.*

Dated: May 11, 1959.
Approved:

H. B. MCCOY, *Administrator.*

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EXHIBIT F

U.S. DEPARTMENT OF COMMERCE,
BUSINESS AND DEFENSE SERVICES ADMINISTRATION,
*Washington, D.C., June 2, 1959.*

DEAR BDSA EXECUTIVE RESERVIST: As you know, we held our first national meeting of the BDSA executive reserve on May 12 and 13. Some 600 of our reservists found it possible to attend the 2-day session. Taking advantage of the presence of over one-half of our reservists in Washington, we distributed certain material which we feel will bring the BDSA executive reserve closer to operational readiness in the event of an attack on the United States. Your copy of each of these documents is enclosed.

During the conference, W. C. Truppner, Director of BDSA's Office of Industrial Mobilization, explained to the reservists who were present the reasons why a revision in the administrative requirements for our executive reserve is necessary. In order to provide those reservists who did not have an opportunity to hear the explanation firsthand with the necessary background, there is enclosed a summary of Mr. Truppner's remarks. As a part of the summary explanation, there is included a listing of the documents being sent you. Following each relevant document title, we are noting comments which the reservists found helpful in understanding the contents of the material.

If, after reviewing this change, you have additional questions, please feel free to write to us. While it is obviously highly desirable to effect the change as rapidly as possible, we are not faced with any specific deadline dates to complete the actions.

The reservists present at the conference together with members of other Government agencies with mobilization responsibilities almost unanimously felt that the revision in handling the BDSA executive reserve program represents a significant breakthrough in our joint efforts to make the executive reserve a more effective organization to deal with the consequences of an attack on this country. I sincerely hope that you find it possible, if you have not already done so, to execute the appointment affidavits in order to effect your provisional postattack appointment as a Federal employee solely for the purpose of enhancing your mobilization potential in the event of an attack on the United States.

Sincerely yours,

H. B. MCCOY, *Administrator.*

P.S.—This letter and enclosures are being sent to all BDSA executive reservists whether they attended the conference or not. We hope those who attended will find the summary statement useful.

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EXHIBIT G

SUMMARY OF REMARKS OF W. C. TRUPPNER AT BDSA EXECUTIVE RESERVE CONFERENCE, MAY 12–13, 1959

The Business and Defense Services Administration is entirely satisfied with the arrangements that have been made to utilize the services of the BDSA executive reserve in the event of limited war. In this statement, the term "limited war" describes a conflict involving the military forces of the United States in an area of the world other than continental United States.

The size, composition, and experience of the BDSA reserve is entirely adequate to meet a production agency's needs under these conditions. Since the Government will be functioning under normal conditions, staffing of such an agency through ordinary procedures can take place in a normal manner. The original statement of understanding will be adhered to to the letter. In a limited war emergency, executive reservists will be expected to assume responsible positions in Government, upon request, unless there exist personal or company conditions which do not make this feasible.

These conditions, however, do not characterize a situation which would be expected to exist in a general war or in the wake of an attack on this country. The term "general war" describes a situation in which the continental United States is subjected to enemy attack with either nuclear or nonnuclear weapons. Planning should assume the worst and hope for the best. The proposed changes in the administrative requirements for the BDSA executive reserve are limited solely to an attack situation. Conditions which we are taking measures to combat are as follows:

> The United States is subjected to severe nuclear attack. For some period of time, there is no effective Federal Government operating from Washington in an administrative sense. When effective Federal Government direction and administration is resumed, the first phase of the postattack situation for which we are planning has concluded and a new set of ground rules will govern. Widespread damage has been done to the country. Many of our large industrial centers have been destroyed by blast or burned. Radioactive fallout will blanket and render inoperable large land areas not subjected to direct blast damage. Casualties are substantial and numbered in many millions. The problem of human and national survival is not merely a Government problem; it is everybody's problem. The BDSA executive reserve is scattered throughout the country with some 15 percent not even located at the place our records show as their home base.

It is clear that the degree to which a BDSA executive reservist can help in this situation is dependent upon himself and the steps which have been taken prior to the attack to permit him to be effective. One basic assumption underlies our whole approach to the problem presented by the foregoing. We assume that under these conditions our people, our local community governments, would turn to our industrial executives for help. Industrial executives are in the business of organizing. They are in the business of dealing with new problems. They are in the business of dealing with people. This is the very kind of experience and knowledge that would be at a premium for dealing most effectively with the consequences of an attack on our country.

Our problem is not how to get our BDSA executive reservists into this situation. This will take care of itself. Leadership is likely to be the scarcest of all commodities and the BDSA Reserve represents an important source of supply. In the face of this, our problem is to devise a means of making our reservists more effective in dealing with a postattack situation than they would be if they were not reservists.

It seems clear that the key to the solution lies in the way that the administrative and procedural details inherent in converting the Executive Reserve to an effective arm of the Government are handled. The very planning assumptions set forth above make it abundantly clear that the immediate postattack phase has to be concluded before these administrative actions can be accomplished by either the Government or the reservist. If the Government is not

functioning in an administrative sense, recruitment, swearing-in, delegation of authority from Washington, and the like cannot be accomplished until long after an attack.

If this gap is to be filled, the conclusion is inescapable. The administrative actions required to make the BDSA executive reservists effective members of the Government must be completed before, not after, an attack.

There are enclosed five documents designed to meet this need. These are listed below with comment which you may find helpful. (Reservists who attended the May 12 conference have already received these documents.)

*1. Provisional postattack appointment statement—May 12, 1959*

This statement provides the necessary instructions for handling the Notification of Personnel Action (standard form 50) and Appointment Affidavits (form GA–482). Please read this carefully before completing form GA–482. This explanatory statement together with the attached forms is regarded by BDSA as constituting a revision of the original statement of understanding filed by each reservist. It is expected that reservists will handle it on this basis with their company officials unless this should be inappropriate.

*2. Notification of personnel action—standard form 50*

This form contains the machine signature of the Director of Administration. It is to be retained by each reservist. Note the two paragraphs in item 19, "Remarks." You will observe that two conditions must be met before the appointment becomes effective. The second of these conditions always remains within the control of each reservist.

With respect to item 9, series, grade, salary, there is entered "$50 per diem WAE." WAE stands for "when actually employed." Please note in paragraph 4 of the provisional postattack appointment statement that reservists can waive such compensation on a post facto basis if they so desire. In this event, they will, in effect, serve on a WOC basis. This decision remains entirely in the hands of each executive reservist.

*3. Appointment affidavits—form GA–482*

This is a standard Government form which has been adapted for use by the BDSA Executive Reserve. You will note that because of the conditions set forth in section 19 of standard form 50 the filing of this affidavit does not affect the status of any executive reservist prior to fulfillment of the conditions set forth. This form should be completed immediately by each reservist in accordance with the instructions in the last paragraph of the May 12 statement. It is to be returned to BDSA.

*4. Postattack responsibilities card*

Each reservist is to affix his signature in the space provided. This card has been designed to permit the reservist to carry it in his wallet. It is expected that the civil defense identification card previously issued to each reservist and bearing the same identifying number as the postattack responsibilities card will fit into the fold.

*5. Postattack manual for BDSA executive reservists*

This manual contains detailed instructions to the members of the BDSA Executive Reserve with respect to their responsibilities in the event of an attack on this country. It is designed to be used in conjunction with the postattack responsibilities card described above.

In order to complete the description of the administrative actions being taken to make the BDSA Executve Reserve operationally effective in the event of attack, there is set forth below the relevant paragraphs of BDSA emergency delegation No. 1, at present being issued to regional production directors of the Business and Defense Services Administration, or its successor agency.

"1. In the event of attack upon the United States each regional production director of BDSA will exercise, within his region, control in the interest of national defense of the production, distribution and use of all materials and facilities as defined in the Defense Production Act of 1950, as amended, except:

"(1) Food and the domestic distribution of farm equipment and commercial fertilizer;

"(2) Petroleum, gas, solid fuels and electric power; and

"(3) The use of domestic transportation, storage and port facilities.

"2. Pursuant to Executive Order 10480, as amended, Defense Mobilization Order I–7, as amended, and Department of Commerce Order No. 152, as revised and amended, with respect to the materials and facilities as set out in the preceding paragraph, and for the purposes therein set forth, each regional production director of BDSA, within his region, is hereby delegated, with power to redelegate, the priorities and allocation powers provided in section 101(a) of the Defense Production Act of 1950, as amended, together with such other priorities and allocation and related power and authority as may hereafter be vested in the Administrator of the Business and Defense Services Administration or its successor agency. In connection therewith, there is hereby delegated the power and authority provided in sections 704, 705, and 706 of the Defense Production Act of 1950, as amended.

"3. The delegations provided for in paragraphs 1 and 2 to each regional production director of BDSA shall be exercised only during such periods of time as communications between such regional production director and the national headquarters of BDSA or its successor agency are inoperative.

"4. In any region in which a regional production director of BDSA has not been appointed, but only until such time as one has been appointed, the Assistant Director for Resources and Production of OCDM for that region is designated the Acting Regional Production Director of BDSA.

"5. The authority herein delegated shall be exercised in conformity with policies, rules, regulations and orders of the Office of Civil and Defense Mobilization and the Business and Defense Services Administration, or their successor agencies.

"BUSINESS AND DEFENSE SERVICES ADMINISTRATION,
"———— ————, *Administrator.*"

To summarize, priorities and allocation authority with power of redelegation will flow from the OCDM regional offices in the event of attack. Executive reservists will automatically become Government employees under the same condition as soon as they report to the emergency operating centers.[1] Authority to exercise the priorities and allocation powers will be redelegated to the reservists at the emergency operating center as appropriate.

At this point, the Executive Reserve is transformed into an official emergency production agency staff armed with appropriate authority to permit it to discharge its responsibilities. Each reservist will operate in his own community until such time as he may be instructed to report to the regional OCDM office. The composition of the OCDM regions and the addresses of the regional offices are shown in the BDSA Directory of Executive Reservists dated April 15, 1959. For some time, however, it seems clear that reservists will be far more useful in conducting operations in their own community than they would be if located at the site of a regional office.

It is hoped that the procedure set forth above fills the gap which has existed heretofore in making the BDSA Executive Reserve an effective Government instrument in the event of attack. These steps represent the breaking of new ground for the Government as well as the members of our Reserve. If the foregoing explanation does not suffice to answer all questions regarding this proposal, please feel free to write to the Office of Industrial Mobilization, Business and Defense Services Administration, for additional information.

Please detach the preaddressed buff card attached to the enclosed material and return it to the same office to signify that you have received this material and to permit us to keep our records up to date.

---

### WEATHER BUREAU—SUMMARY REPORT ON MOBILIZATION ACTIVITIES

Programs performed by the Weather Bureau in the areas of civil defense and defense mobilization are limited to the support of civil defense activities and agency readiness. These programs are reported upon below under the appropriate sections of the outline suggested by the Joint Committee on Defense Production.

---

[1] Information regarding the location of the emergency operating centers will be sent to reservists at a future time.

UNIVERSITY OF MICHIGAN LIBRARIES

*1. Mobilization programs conducted by your department*

Programs conducted in support of civil defense are:

(*a*) Meteorological consultant service to OCDM.

(*b*) The fallout forecasting (U.F.) program.

(*c*) Radiological monitoring observations.

*2. The authority from which your department derives its powers for such programs*

Programs (*a*) and (*b*) are performed under the authority of OCDM delegation No. 3 and (*c*) under a cooperative agreement.

*3. A summary of each program*

(*a*) The capability for providing meteorological support to the national and regional offices of OCDM is maintained through the assignment of meteorological consultants to those offices.

(*b*) Estimates of areas likely to receive radioactive fallout in the event of nuclear explosions derived from an interpretation of the meteorological factors affecting the deposition of particulate matter are made and distributed nationally for 65 observing points twice per day. For 20 of the observing points, these services are performed 4 times per day. These estimates, properly charted and interpreted, can be applied to any point in the United States.

(*c*) Under cooperative agreement with OCDM, the Weather Bureau participates in the Federal fixed station fallout monitoring network. About 279 field stations have now been supplied with monitoring equipment and personnel trained in their use. Approximately 30 additional offices will joint the network as soon as instruments become available. This program operates on a minimum basis of one monitoring reading per week to maintain familiarity of the personnel with procedures and to check operability of the instruments. Coincident with an alert or emergency, readings will be taken hourly.

*4. A summary on the effectiveness of the programs*

Programs (*a*) and (*b*) have been evaluated through the annual Operation Alert exercises and judged very effective. Program (*c*) was tested in two OCDM regions during Operation Alert 1959 and the results were very favorable.

*5. A statement on the current need for the programs*

Programs (*a*), and (*b*), and (*c*) are essential if an all-out effort is to be made for civilian survival in event of a nuclear attack.

*6. A summary of the programs as related to small business*

Not applicable.

*7. Major problems which now confront your department in carrying out mobilization programs*

The major problem encountered in carrying out mobilization and civil defense programs with which this Bureau is concerned is the availability of funds for these purposes.

*8. Changes in mobilization planning and readiness measures to meet future emergencies*

None.

*9. Progress achieved in the continuity of production, and dispersal of industry*

Not applicable.

*10. Summary of any standby programs for any future emergency*

Plans are being developed in coordination with the military to provide for the control of weather information in time of war.

*11. Changes in organization during the past year*

None.

*12. Future objectives*

An immediate objective for emergency readiness by the Weather Bureau is the stockpiling of upper air observational supplies sufficient to maintain that essential program for a 3 to 6 months' period immediately after attack. Funds are being requested in 1961 budget estimates to accomplish this. Previous requests have been disallowed.

*13. Availability of funds for defense needs*

No special funds have been provided the Weather Bureau for defense needs except under the delegation from OCDM.

*14. A description of the manner in which your mobilization programs fit into a defense plan, and the objectives to be achieved*

Weather Bureau plans for operation in a war emergency are pointed toward maximum support of the military forces. Continuous coordination is affected in this area through Weather Bureau representation on the joint meteorological group of the Joint Chiefs of Staff. Another objective is assistance to civilian survival efforts.

*15. Such other information as may appear pertinent in summarizing your mobilization activities for the past year*

None.

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COAST AND GEODETIC SURVEY—REPORT ON MOBILIZATION ACTIVITIES

1. *Mobilization programs conducted.*—Mobilization planning; continuity of direction; cadre to OCDM site; alert exercises; relocation sites; remote storage of essential records; civil defense training; and identification cards.

2. *Authorities.*—DMO I–8, 19 F.R. 875, February 16, 1954 (par. 2(1)), "Assignment of Defense Mobilization Responsibilities to the Department of Commerce;" Regulations Governing Cooperation of the Coast and Geodetic Survey with the Armed Services (under authority contained in sec. 16 of the act of May 22, 1917 (40 Stat. 88)); and, Department Order No. 161.

3. *Summary of each program.*—Mobilization planning is primarily to provide for continuity of essential functions. Continuity of direction is provided by a designated succession to command and naming of cadres and key groups for relocation purposes.

Cadre to OCDM site provides part-time continuity at a relocation site and training and liaison at a high level.

Alert exercises provide practice operations at relocation sites.

Relocation sites provide alternate sites for continuity of essential functions.

Remote storage of essential records provides dispersal of these records, and reasonable assurance that in the event of widespread destruction there will be sufficient basic records available to continue essential functions.

Civil defense assignments include first aid, rescue, wardens, firefighters, and radiological defense.

Identification card program consists of issue and control of civil defense identification cards to key relocatees and civil defense personnel.

4. *Summary of effectiveness of the programs.*—C&GS has a mobilization plan for the continuity of essential functions. The plan includes occupation of a relocation site, standby emergency orders, an order of succession, and a relocation manual. The plan would be more effective if the headquarters and production plant were moved to a safe minimum distance from probable target area.

Operation Alert exercises are effective for training of selected key personnel, and for determining problems and inadequacies of use of relocation sites.

The essential records program is one of this Bureau's most effective items of preparation for emergency. Separate color pulls of all nautical and aeronautical charts which are printed, and copies of geodetic, tidal, and other geophysical data are sent to these dispersed depositories.

5. *Current needs for the programs.*—Programs are needed as preparation for emergency and mobilization situations.

6. *Programs as related to small business.*—There is no direct relation of these programs to small business.

7. *Major problems.*—The major problem is that of obtaining adequate lithographic printing facilities and supporting supplies and equipment outside of target areas.

8. *Changes in mobilization planning and readiness measures to meet future emergencies.*—A cadre of top executive personnel has been designated and trained for duty at OCDM site. One of the major mid-continent essential record storages has been moved to a hardened site.

9. *Progress in continuity of production and dispersal.*—A major essential function of the Coast and Geodetic Survey is the production of nautical and aero-

nautical charts. Essential records for production are adequately dispersed. Essential facilities for chart production are not adequately dispersed. Survey and data collecting activities (survey ships and field parties) are adequately dispersed.

10. *Standby programs.*—All above programs are active. There are standby orders and instructions, but no standby programs as such.

11. *Changes in organization.*—The only change in organization has been designation of a cadre for duty at OCDM site.

12. *Future objectives.*—Movement of headquarters office and chart production plant to a point on the outskirts of Washington which is outside the probable target area.

13. *Availability of funds.*—No funds have been appropriated directly for defense needs. Costs to date have had to be absorbed. This has limited program.

14. *Programs fit into defense plan.*—Program is consistent with the national plan for civil and defense mobilization. Its principal objective is to provide for continuity of essential functions.

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BUREAU OF THE CENSUS—REPORT OF ACTIVITIES RELATED TO MOBILIZATION PROGRAMS

1. Although the Bureau of the Census does not have direct program responsibility under the Defense Production Act, it is responsible for providing specialized services in support of the programs of other agencies. In furtherance of this objective, mobilization functions of the Bureau fall into two broad categories:

(*a*) Activities conducted under the continuity of Government program which involves emergency planning for the carrying on of essential functions during a period of national emergency; and the training of key personnel in civil defense measures including radiological defense, first aid, light rescue work, and so forth.

(*b*) Activities undertaken on a reimbursable basis for agencies which have primary responsibility for defense and mobilization programs under the Defense Production Act. These statistical support activities are described more fully below. (See par. 3.)

2. (*a*) Authority for emergency planning activities under the continuity of Government concept is derived from DMO I–8 of February 16, 1954.

(*b*) Authority for undertaking activities on a reimbursable basis for other Federal agencies is derived from 31 U.S.C., sec. 686.

3. The mobilization activities of this Bureau may be summarized briefly as follows:

(*a*) Under the national plan for civil defense and defense mobilization, the Bureau of the Census is responsible for conducting censuses and surveys of population, housing, agriculture, industry, business, State and local governments, and other fields, as required for postattack damage assessment, and surviving resource evaluation. As a result, emergency planning activities are designed to develop and maintain readiness to insure the continuity of essental functions in the event of attack upon the United States. These activities include the training of key personnel and executive reservists, the reproduction and safe storage of essential Census records, and the participation in test exercises conducted by the OCDM.

(*b*) The statistical support projects undertaken by the Census Bureau on a reimbursable basis during the past year will be reported by the primary agencies concerned. It may be of assistance to the committee, however, to describe these activities briefly in this report since they are illustrative of the kinds of specialized services which Census is uniquely qualified to supply in the defense and mobilization effort:

(*1*) *For the Office of Civil and Defense Mobilization*

(*a*) The Census Bureau undertook a project to update industrial production data for some 29,000 large (over 100 employees) manufacturing establishments. This work, which involved also the assigning of accurate geographic locations to each of these plants, was done for the National Damage Assessment Center of OCDM. The results have been transferred to NDAC on magnetic tapes for use in electronic computer systems.

(*b*) The Census Bureau continued its annual survey of State and local government expenditures for civil defense acivities. In addition to expenditures for various kinds of civil defense undertakings, this survey also includes information on personnel assigned to CD projects and the number of State and local government workers trained in CD measures.

*(2) For the Business and Defense Services Administration*

The Census Bureau assisted BDSA in a large-scale mail canvass of production capability and existing stocks of some 500 critical survival items. In fiscal year 1959, some 127 surveys were undertaken at the manufacturing level, and 8 surveys were completed at the wholesale level. Census participation included the establishing of mailing lists, the mailing of schedules, the tabulations of results, and the geographic identification of the production facility or existing inventory.

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### National Bureau of Standards

The National Bureau of Standards has no responsibilities stemming specifically from the Defense Production Act. It has functions designated by OCDM as essential to be continued in an emergency, consisting of the provision and calibration of standards for military and essential civilian production, and the provision of specialized services for DOD, OCDM, and other agencies on military materials, restoration of industrial potential, and evaluation of devices, proposals, etc. Its report is, therefore, confined to a brief outline of emergency plans and comment on planning for relocation of the establishment.

The emergency organization, functions, and authorities of NBS have been described in detail in Emergency Planning Order 1–12 of the Department of Commerce, dated June 26, 1957. Essentially this order provides an emergency readiness organization responsible for insuring advance preparations to move quickly into emergency operations, for discontinuing nonessential operations, and for providing interim supervision following an emergency. (This organization currently superimposed on the Bureau's regular structure might largely be continued during the emergency operation stage should NBS be permanently relocated to Gaithersburg, Md., prior to an emergency.) An emergency operations organization has been designated to restore operation of essential functions following an emergency. It consists of a liaison staff at the emergency relocation headquarters of the Department of Commerce, a staff at the Boulder Laboratories of the Bureau at Boulder, Colo., and other components at a site or sites to be selected.

In our last year's report we pointed out that the appropriation of funds for production of detailed architectural and engineering designs for the new facility to be built at Gaithersburg, Md., goes a long way toward assuring postattack survival of NBS as a functioning organization. While the funds for construction of the new site have not as yet been made available, the authorized planning work is proceeding as rapidly as possible.

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## AGRICULTURE DEPARTMENT

U.S. Department of Agriculture,
*Washington, D.C., September 28, 1959.*

Hon. Paul Brown,
*Chairman, Joint Committee on Defense Production,*
*Washington, D.C.*

Dear Congressman Brown: In response to your request of August 10, 1959, we are pleased to submit to you the Annual Report of Defense Activities of the U.S. Department of Agriculture, September 1958–September 1959. The report has been developed in accordance with the outline you suggested and summarizes programs carried out under the Defense Production Act as well as related defense activities.

Sincerely yours,

True D. Morse, *Acting Secretary.*

### I. Defense Mobilization Programs of the Department of Agriculture

Defense mobilization and civil defense programs of the Department of Agriculture are directed toward the development of plans for the handling of food[1] as a resource and measures to assure adequate production, equitable distribution

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[1] Food is defined to include all commodities and products that are capable of being consumed by humans or animals, as well as fats and oils, naval stores, tobacco, wool, mohair, cotton, hemp, and flax fiber until they lose their identity as agricultural commodities.

and wise use of food supplies in an emergency period; plans for defense against biological and chemical warfare and radioactive fallout in relation to crops and livestock and certain other areas; and plans for defense against rural fires resulting from attack. Many of the Department's defense responsibilities parallel closely its normal peacetime functions which can be tailored to emergency use with little adaptation; other responsibilities involve more specialized preparation and study.

## II. Authorities

Defense programs carried out under the direction of the Secretary of Agriculture have been assigned through Executive orders and delegations under the Defense Production Act, the Federal Civil Defense Act, the Universal Military Training and Service Act, the Reserve Forces Act of 1955, the National Security Act, the Export Control Act, the Strategic and Critical Materials Stockpiling Act, and the Department's own enabling legislation.

## III. Summary of Program Activities

### A. PLANNING FOR EMERGENCY USE OF FOOD RESOURCES

*1. Review of supply-requirements situation*

A review was made of the supply-requirements situation for major agricultural products as reflected after the July 1959 crop and stocks reports. The review indicates prospects for at least adequate supplies of all important types of crops and livestock products. Livestock production is expected to be at or near record high levels. However, the large stocks would provide a valuable reserve food supply if this Nation were attacked. Heavy production of corn, wheat, and grain sorghums continues to increase surpluses of food and feed grains. A large supply of fats and oils is assured by the expected cotton and soybean crops and there are prospects of very high pork and lard production during the coming year. Crop prospects also indicate adequate supplies of fruits, vegetables, and specialty crops.

Based on supply-requirements studies, projections are made for emergency conditions. Problem areas are discovered and remedial action planned.

Basic food commodity data resulting from the supply-requirements review form an integral part of the records maintained at the Department's relocation site, and would be useful in carrying out emergency food operations. These data are supplemented by information on uses and substitutes and domestic and foreign sources of supply.

*2. Protection of Government-owned food stocks*

An annual review of the location of CCC stocks as of December 31, 1958, indicated that a very high proportion of the Government-owned stocks were in areas of relatively low vulnerability to attack. The Commodity Credit Corporation continues to follow its policy of minimizing its holdings in large cities considered to be vulnerable in case of attack on this country, whenever this can be done without materially increasing storage and handling costs.

During the past year, stocks of grain owned by CCC have increased, but smaller proportions of the grains are in vulnerable areas. Percentages of CCC grain stocks in vulnerable areas on December 31, 1958, were: Corn 5.4 percent, wheat 18.1 percent, rice 50.8 percent, dry beans, 4.1 percent, and other grains 14.6 percent. CCC stocks of dairy products are currently relatively small. On December 31, about 41 percent of these stocks were in the more vulnerable areas, reflecting largely the location of much of the cold-storage capacity in such areas. Less than 15 percent of the CCC-owned cotton stocks were in vulnerable areas.

Stocks owned or under loan by CCC as of December 31, 1958, represented more than 2 years' domestic civilian use of wheat, over three-quarters of a year's supply of cotton, nearly a year's supply of rice, over a year's supply of grain sorghums and nearly 6 months' domestic supply of corn. Dairy products owned by CCC represented only a few days' production. A copy of the December 31, 1958, report is attached (exhibit 1).

*3. Guidance to farmers and the food industry*

During the year, work began on a program aimed at assuring continuity of farm production in an emergency. The program is designed to carry mobilization planning to the farmer through established information and educational agencies of the Department.

Defense planning work during the year included contacts with the food industry to bring about a better understanding of emergency problems which would be faced both by industry and the Department.

Meetings have been held throughout the country with representatives of the baking industry on the subject of defense and emergency feeding. Also attending these meetings were members of industries who furnish ingredients and equipment to the bakeries.

A policy regarding the consultation with and use of industry advisory committees for defense planning purposes was adapted and set forth in Secretary's Memorandum No. 1432. (See exhibit 2.)

*4. Standby plans and orders*

Orders which would enable the Department to carry out emergency responsibilities have been prepared and continue to be maintained on a standby basis. During the year standby orders controlling the emergency distribution and use of fertilizer and farm equipment have been revised to insure maximum usefulness.

The collection and maintenance of appropriate statistical data necessary in the formulation of standby food stabilization measures has continued.

*5. Nonfood materials and facilities*

As food cannot be produced, processed, or distributed without the use of manpower, chemicals, production and processing machinery, packaging materials or transportation, these items are of primary importance to agriculture. A review of the supply and requirements situation for these nonfood materials and facilities as they relate to agriculture is maintained by the Department. A summary of the current situation is attached (exhibit 3).

Should an emergency occur, the Department would serve as claimant for these requisites. In order to prepare for this eventuality, close cooperation is maintained between the Department and such resource agencies as the Departments of Labor, Interior, and Commerce. This relationship is essential to planning an adequate postattack food supply program.

Following are highlights of activities during the year in the area of nonfood materials and facilities.

*Farm equipment*

Efforts have been made to improve defense planning data for various categories in this field. The 1960 Census of Agriculture will obtain information more helpful to the mobilization planning base, as well as being equally usable in regular programs of the Department. It is hoped that more definitive import data will be available. These are needed and could become of greater importance if the apparent trend toward increased imports of tractors becomes a reality.

Additional studies have been made which improve our ability to forecast emergency needs. During the year, tentative requirements were developed for replacement petroleum fuel storage tanks for food production. There has been a definite need the past few years for these requirements.

Replacement requirements were estimated for farm-to-market milk truck chassis and tanks.

A study of the kilowatt hours of energy required per unit for processing various kinds of foods was completed during the year. The results will be used in determining energy requirements for processing fixed quantities of a given food.

A study was made on the role the Department should have in the distribution of petroleum products to farmers for food production in an emergency.

*Food processing, containers and packaging materials*

Test exercises have shown that our capability to supply food to survivors following a nuclear attack would be limited by the inadequate supply of suitable containers for harvesting, processing, and shipping the food from the producer to the consumer. In light of this, the Interdepartmental Committee on Essential Survival Items gave approval to the proposal that food containers be added to the list of essential survival items.

The Department actively participated in developing the data necessary in initiating surveys in the container field, limited at this time to metal cans, glass containers, and closures.

In cooperation with the Department of Commerce and the industry, plans have been made to obtain information from industry which, when compiled, will form the basis of any recommendations that may be considered necessary in

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assuring maximum survival of the industry and supply of the container items in the postattack period. Progress made up to this time is highly satisfactory.

A pilot study has been initiated with one segment of the container industry which has production facilities dispersed throughout the United States. This study is designed to determine the extent to which postattack production would be influenced by problems of transportation of the basic material to the plant, storage, stocks, equipment maintenance, power, water, labor, and distribution. It is believed that the results of this study and the problems involved in an emergency would be similar to those of many other major production segments of the food container industry. The progress in this study is satisfactory.

*Agricultural chemicals*

Agricultural chemicals would be essential in a defense emergency to produce and protect food for survival. To maintain current data for defense planning in this field, evaluation of the supply and requirements picture for fertilizer and pesticides was continued during the year. Future trends in fertilizer consumption and methods of determining them were studied. Statistical data were brought up to date in "The Fertilizer Situation for 1958–59" and "The Pesticide Situation for 1958–59." Requirements data were accumulated for chemicals for other agricultural purposes such as animal feed supplements.

Since pesticides are required for both food production and health protection, the Department is cooperating with the Department of Health, Education, and Welfare in the consideration of mutual problems relating to these materials.

In an emergency the dispersal of current information would be advantageous. Fertilizer supply data for the United States were furnished to the food and agriculture organization and to the Organization for European Economic Cooperation for their summaries of the world situation. Likewise, pesticide consumption data were supplied to FAO.

Efforts are being made continually to improve the basic sources of chemical data. The Bureau of the Census was advised as to the effects of certain proposed changes in its import classification for fertilizer and pesticidal materials.

During the last decade, many new pesticides have come into extensive use. These materials are now of much interest statistically. The pesticide tables carried annually by "Agricultural Statistics," therefore, have been enlarged in scope with particular attention to those materials in greatest present use.

*Rural electrification*

During the year the Rural Electrification Administration surveyed rural electrical and telephone borrowers plant requirements for future years. These surveys provide information on the facilities which borrowers must build to provide dependable electrical and telephone service in rural areas. In a period of national emergency, these estimates will be used in determining materials requirements and in developing plans for materials allocation.

*Forest Service*

Collection of forest survey information on forest resources and timber industries in the United States was continued, obtaining basic information useful for emergency timber production programs. Additional comprehensive reports on forest resources and forest industries in various foreign countries were prepared. Under contract with the Department of the Air Force, work continued on special photointerpretation keys.

*6. Manpower*

The development of a reliable seasonal farm labor force and of effective programs to assure adequate labor at the places and time needed is an important part of manpower mobilization activities. It is important that manpower agencies have knowledge of agriculture's manpower requirements and give recognition to such requirements in the development of standby programs.

During the year, close working relationships were maintained with the manpower agencies. Participation in the activities of the President's Committee on Migratory Labor continued as well as representation on the Manpower Policy Committee of OCDM and the Interdepartmental Committee on Essential Activities and Critical Occupations.

Many petitions, letters and telegrams have been received in this Department on the subject of proposed revised regulations governing the interstate recruitment of domestic workers, and recommended extension of the minimum wage and overtime provisions of the Fair Labor Standards Act to agricultural employment. The objective of these proposals is to make farm employment more

attractive to domestic workers in order that the importation of foreign workers can be reduced to a minimum.

The Department was represented at nationwide farm labor conferences in Los Angeles in February and in St. Louis in April. Methods were discussed for improving the effectiveness and stability of the domestic farm worker program, living and working conditions for seasonal hired workers, housing, sanitation and continuity of employment, especially for migrant farm workers.

Representatives of the Department worked closely with a committee composed of religious groups in the development of a basic statement on the hired farm work force. This information is intended to serve as a guide to rural ministers for their participation in community programs for hired farm workers since the hired farm work force is an important segment of the community population in many areas. The church is recognized as an important force in molding public opinion and can, therefore, contribute to the effectiveness of the farm labor force in the community and in getting community action, especially in the solution of migrant farm labor problems.

The need for continuing authority to use Mexican national farm workers for fire fighting by the Forest Service was presented to the Assistant Secretary of Labor for consideration during the current discussions of the international agreement. These farm workers have rendered valuable service in this capacity in the past and their continuing use is extremely important in those areas where they have been contracted for farm work. In case of a national emergency, this source of labor may prove to be an extremely valuable supplement to limited supplies of domestic workers. Their use, as was true during World War II, would probably be extended to industrial types of employment.

A comprehensive program of research and service work on all aspects of farm labor was continued during the year, including: (1) Annual estimates of hours of farmwork; (2) annual estimates of labor productivity; (3) studies of employment and movement of migratory farmworkers; (4) studies in manpower resources in low income and labor surplus areas; (5) survey of labor used and other aspects of production of truck crops; (6) surveys of operations undergoing mechanization; (7) estimates of future need for seasonal and migratory workers; and (8) estimates of per unit labor requirements for specific farm enterprises. These projects provide data useful in appraising the current farm labor situation and in estimating emergency manpower requirements.

### B. DEFENSE AGAINST BIOLOGICAL AND CHEMICAL WARFARE AND RADIOACTIVE FALLOUT

At the request of the Committee on Civil Defense of the American Chemical Society, information on biological and chemical warfare defense was presented on April 24. The briefing, in addition to Department representation, included information from the Department of Health, Education, and Welfare and the Department of Defense. Representatives from the Civil Defense Committee of the American Medical Association and the Office of Civil and Defense Mobilization also attended.

An Interagency Committee on Chemical and Biological Defense was established by the OCDM with the Department representative being selected from Agricultural Research Service. Meetings were held in April and June to develop and establish the terms of reference of the committee.

In January a meeting took place between representatives of the Departments of Agriculture, Health, Education, and Welfare, Defense, the Office of Civil and Defense Mobilization, and the Institute of Food Technologists. The purpose of the conference was to discuss the vulnerability of the food industry to attack from biological and chemical warfare and measures to reduce such vulnerability. The meeting revealed that considerable progress has been made in recognition of the problem and in doing something about it. It appeared that more will be done, particularly if funds requested for the fiscal year 1960 are made available.

As outlined in Secretary's Memorandum No. 1430 (exhibit 4) agencies within the Department have been assigned responsibility concerning a nationwide monitoring system on radioactive fallout affecting areas related to food and agriculture.

A training program is being established and initially the Department will train personnel to man the 450 stations. Three training courses for instructors have been scheduled during October and November and will include the use of monitoring equipment and the interpretation of the relationship of various radiation intensities to land use and crop management. As additional instructors are qualified, the program will be extended to insure trained personnel for

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all fixed monitoring stations by the end of fiscal year 1960. However, such training of personnel for the fixed monitoring stations is dependent upon the availability of funds.

Other radiological defense monitoring training included courses for Department livestock regulatory officials having a nationwide responsibility for the health of livestock and the wholesomeness of food products derived from these animals. This radiological defense training will develop a capability that will help to assure a minimum loss of productivity of livestock and livestock food products and a maximum salvage of these resources in areas experiencing radioactive fallout.

Training courses in radiological monitoring given by OCDM and the Department of Health, Education, and Welfare, as well as other Federal and State agencies, are being utilized wherever possible to secure additional knowledge in this field. However, training given by other departments and organizations is expected to lack information on many agricultural problems that must be met in case of emergency.

The Department has prepared a working draft of a publication entitled "Radioactive Fallout in Time of Emergency, Effects Upon Agriculture" to supplement Farmers' Bulletin No. 2107, "Defense Against Radioactive Fallout on the Farm," revised May 1958. The publication describes the potential problems that would arise on the farm from a nuclear attack on this country and contains information on the measures that should be carried out by farmers to protect, insofar as possible, farm families, livestock, and other essential agricultural resources from the fallout hazard. It also deals with the immediate effects of fallout and the long-term hazards associated with iodine 131 and strontium 90. The material is directed to agricultural officials to whom the farmer looks for help and guidance. It is expected that the publication will be prepared for final review by the several agencies concerned with this field of activity in the near future.

Research has continued on means of reclaiming soil contaminated with radioactive materials and the movement of radioisotopes through the soil and into the plants. Preliminary results on the project dealing with the reclamation of soil have been developed and reported.

Progress has also been made in the study designed to determine if radioactive materials ingested by the dairy cow and goat may be excreted in the milk or altered by dietary procedures.

Arrangements were made with the Public Health Service to obtain copies of monthly reports on radioactivity levels of milk collected at sampling stations located in different parts of the country. This information and other information concerning radioactivity levels in milk is reviewed currently as received.

### C. RURAL FIRE DEFENSE

Further work on an operational rural fire defense plan is pending completion of the fire defense annex to the national plan for civil defense and defense mobilization. Several State rural fire defense plans were brought up to date. Forty-one States (including Hawaii) have completed plans.

The Department is represented through the Forest Service on the Committee on Fire Research and Fire Research Conference group of the Academy of Sciences-National Research Council. This group is now sponsored jointly by the Office of Civil and Defense Mobilization and the Departments of Defense and Agriculture as the agencies most interested in a more complete understanding of mass fire behavior. Its purpose is to stimulate basic research in the free burning fire since this has previously been a neglected field.

To provide international exchange in this field, a number of foreign scientists are being invited to participate in a symposium being arranged by the Fire Research Committee in November 1959. The theme of this symposium is to be "the use of models in fire research." Scientists from England, France, Germany, Japan, Canada, and probably Russia will participate.

Closely allied to the rural fire defense area are two research projects that are now underway through contractual arrangements between the Forest Service and OCDM. The first is a fire model project conforming closely to approaches recommended by the Fire Research Committee. This has made good progress and is being followed with great interest by scientists in flame and combustion research and other related fields. A progress report will be presented at the November symposium. The second project is designed to test the effect of fire on the safety of personnel in standard shelters. Both are being carried out in California. A test area near Berkeley, Calif., has been selected for the shelter

project. It is the site of a reservoir and the fuels cleared from the area will be utilized for the burning tests. These tests will probably be carried out in October.

### D. PLANNING TO INSURE CONTINUITY OF ESSENTIAL DEEARTMENT FUNCTIONS

The Department's national organization for defense was reviewed. Emphasis was placed on the development of broad plans for an emergency field organization. When finalized, these field organization plans will represent an important forward step in the improvement of the Department's emergency capabilities.

Communications and records drills continued throughout the year to train personnel and test emergency procedures.

Delegation of emergency radiological monitoring responsibilities is discussed in part III–B.

Preliminary discussions have been held regarding the role of the Cooperative Extension Service in the defense planning field.

### E. RELATED DEFENSE ACTIVITIES

This section is concerned with activities which are broadly utilized in several aspects of defense planning or which are closely related to national defense.

*1. Stockpiling*

*(a) Activities relating to the strategic and critical materials stockpile*

The Department participates with the OCDM in the consideration of stockpile plans and in the preparation of basic data and reports. Representation is supplied on a number of stockpile committees and related groups. Recent studies of these groups resulted in the decision to dispose of various stockpiles of materials of interest to agriculture; namely, coconut oil, castor bean seed, guayule seed, and opium poppy seed.

The Department conducts stockpile research and experiemental programs on certain strategic raw materials or substitutes. Following is a summary of progress in this field.

*Chemicals.—Digitalis purpurea* and *Atropa belladonna* seeds have been stockpiled in an amount sufficient to supply minimum emergency planting requirements. The seed lots have been tested periodically for viability. Maintenance of viability of seed stocks has become a problem.

Eight new opium poppy strains with higher morphine content were planted for evaluating plot performance and seed increase in Arizona in 1959. Small seed lots of the new strains will be available for stockpile purposes if needed.

*Cordage fibers.*—Florida *Sansevieria* research continued. Some of the hybrid selections, in addition to producing greater yields than either parent, will reach maximum yield in considerably less time than either. There is evidence that the hybrids will not stand in the field without deterioration after maximum yield has been attained, while the flat-leaf types do not detriorate badly on standing. Harvest studies completed this year have shown that the old stands of the flat-leaf types have an annual increase in fiber yield up to 6 years, the most rapid increase occurring between the fourth and fifth years

There is increased interest in this production of Sansevieria by several of the Latin American countries. Requests to the Department for experimental material from the Florida program have become common. It is felt that this slowly expanding acreage in Latin America could offer a supply of high-quality cordage fiber with further expansion, should emergency needs arise.

Working on the sansevieria harvesting, defibering and fiber conditioning machinery methods program has been devoted to maintaining and facilitating growth of the pilot planting at the Palm Beach County Farm and to the development of a cutting mechanism for a mechanical harvester. A sickle type cutter was designed and constructed. Initial tests indicate that it will be satisfactory. Tests of the decorticator designed for lecheguilla were so successful that plans for using the large raspador decorticator have been abandoned and adoption of the portable decorticator with a harvester attached to it will be further investigated.

The phormium program conducted in Oregon and California is in the process of being closed out. It is anticipated that the work in Oregon will terminate about January 1, 1960. The California work is expected to terminate during the calendar year 1960. The Oregon Agricultural Experiment Station has offered

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to cooperate in retaining certain plantings for any future possible propagation need. It is anticipated that the California Agricultural Experiment Station will cooperate in the same manner.

Harvesting data obtained in 1958–59 have indicated that several years, perhaps as many as five, would be required to produce a substantial crop of fiber following planting. The research work in the phormium investigations has established the most suitable methods of propagation, time of cutting, dates, and height of cutting most suitable for maximum yield, range of climatic adapation, and the best clonal selections for planting.

The susceptability of kenaf to the root-knot nematode has been a serious production problem. With the discovery of immunity to this pest in the *Hibiscus eetveldianus* species, a new breeding approach was available. Hybridization between this species and H. *cannabinus* (kenaf) offers a good possibilty of producing a variety of high yeilding, good quality, root-knot nematode resistant kenaf.

In addition a worldwide collection of Hibiscus has been initiated. These species and varieties are being surveyed for nematode resistance as well as other desirable traits. Promising types will be incorporated into the breeding program.

Kenaf acreage is slowly expanding in South and Central America as well as some of the countries of the West Indies. Thus, a source of jute substitute fiber is likely to develop and be available for emergency purposes. Departmental research workers are cooperating by supplying seed stocks and information.

Work on the development of improved harvesting and processing machinery and methods for kenaf and similar fibers has been mainly concerned with developing and testing a crushing mechanism and a divider mechanism to separate the cut stalks from those left standing. Harvesting results during 1959 were successful using the ribboning harvest machine designed on this project. Continued studies are planned in an effort to improve the canal retting system.

*Tanning materials.*—*Canaigre* field experiments, concerned chiefly with developing improved varieties high in tannin and purity and capable of producing high yields of roots of good shape to facilitate digging, were continued in cooperation with the Arizona Agricultural Experiment Station. Several of the better selections, tested in 1959, produced roots analyzing 40 percent of tannin with an extract purity of 70 percent. A storage rot, caused by *Diplodia* spp., caused heavy losses in stored root material from the 1958 harvest. Results of preliminary seed-crown treatment tests indicated that good control of the disease resulted when moisture and temperature conditions in storage piles were favorable for rapid healing of cut root surfaces. Several fungicides also gave promising results when tested for controlling storage rots.

The Department's Eastern Utilization Research and Development Division makes all analyses for tannin and purity and conducts extraction and tanning studies. A private company has undertaken small-scale production looking toward commercial development of canaigre for pharmaceutical uses in addition to the conventional market outlets for tanning and oil-well drilling.

*Oils.*—Castorbean breeding and production research was continued in California, Texas, Oklahoma, Mississippi, and Florida, the objective being to increase the efficiency of production by developing varieties of better agronomic type for each area. Basic research on castrobean diseases is in progress at Beltsville. Three new castrobean inbred lines were released to commercial companies during the year for use in producing hybrid seed.

Engineering research continued on castorbean harvesting, cleaning and conveying equipment. All 12 harvesters produced by 1 manufacturer incorporated developments resulting from the Department's research project. Improved performance of these harvesters was experienced for all of the 6,000 acres harvested.

New problems have developed as this new crop is grown under different climatic and soil conditions. For instance, the dwarf variety castorbean grown in the Midwest is extremely hard to hull; the recent practice of increasing plant population to increase total yields results in a plant with smaller and weaker stems which break off easier during harvest and put a heavier cleaning load on the machine; there are urgent needs for more effective defoliants or a new method of harvesting green and tough seed capsules; low-cost harvesters are needed to make the use of such equipment in low-yielding areas economically feasible—the gradual lowering of the market price to the grower emphasizes the need for much lower cost harvesters than those now in use.

*Rubber.*—Research on guayule as a potential source of natural rubber has been maintained on a standby basis, involving selection for higher rubber con-

tent, higher yield of shrub, and greater disease resistance within segregating populations previously developed by plant breeding. Approximately 30 of the most advanced genetic lines of guayule were planted at Salinas, Calif., in May 1959, for the purpose of increasing the seed supplies. Small seed lots of the superior strains will be available in the event there is any interest in guayule production in the future.

*Forest products.*—Forest products research for various defense agencies continued, including—

Basic research on the conversion of wood pulps into military grades of cellulose nitrate.

Exploring basic properties of nitrocellulose as a fuel for missiles, including dimensional changes with temperature.

Determining properties of plastic laminates and adhesives for use in aircraft and missiles, including high temperature effects on strength.

Development of methods of packaging articles used in warfare, including missiles; also, preparation of manuals used for packaging.

In addition to contract research with defense agencies, the Forest Service program of forest products research includes the development of industrial chemicals from wood waste. Many of these are now manufactured from petroleum, a critical raw material in case of war.

(*b*) *Emergency food stockpiling*

In July a report entited "Food Stockpiles for Civilians in Offshore Areas of the United States" was presented to appropriate committees of Congress (including the Joint Committee on Defense Production). The report indicates that food stockpiling would appear a desirable precaution against interruption of transportation to Alaska, Hawaii, Puerto Rico, and the Virgin Islands. It further suggests that pilot food stockpiles in these areas would provide information and experience still needed on storing and rotating such food stocks. A copy of the report is attached (exhibit 5). Since responsibility for food stockpiling rests with the Office of Civil and Defense Mobilization, the Department recommended to the Director of OCDM that, if he concurred with the conclusions of the report, his agency should initiate the appropriate actions. It was indicated that the Department would be glad to assist OCDM in this work if they so desired.

The Department is continuing a cooperative experimental project with the Government Printing Office for the purpose of determining the contents of a suitable nonperishable food stockpile that could be periodically rotated through the normal GPO cafeteria operation. A list of acceptable foods has been prepared, and prices obtained from three commercial suppliers for use in determining the estimated cost of the stockpile. Estimated cost per unit and per thousand calories for the various kinds of nonperishable foods has been determined, and an analysis of the program is currently being prepared for submission to the administrative group at GPO. It is expected that this program will provide certain basic guidelines for use in determining the kinds and types of nonperishable food that could be stockpiled in the shelter areas of many thousands of similar facilities across the country.

Several meetings were held throughout the year with representatives from OCDM in connection with food stockpiling for shelters with emphasis on required research. As a result of these discussions, a memorandum of understanding between OCDM and the Department was signed, covering "Technical Studies on Food for Shelters." The project requests certain research and studies to analyze food requirements associated with shelter occupancy, including:

The problems of food storage and utilization under conditions which may be expected to prevail in shelters of various types;

Special food requirements of shelters of various types;

Food available now that could be used if necessary to provision such shelters;

The cost of such foods; and

Limited research directed toward improvement of stability of a few selected foods.

OCDM Advisory Bulletin No. 284, "Individual and Family Survival Requirements," was issued during the past year. The Department's Institute of Home Economics reviewed the material contained in the publication and prepared a list of food for emergency stockpiles in the home which was included as a part of the bulletin.

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*2. Activities under the Agricultural Trade Development and Assistance Act*

*(a) Barter*

The barter program of the Department exchanges surplus agricultural commodities for foreign-produced strategic and other materials for stockpiling and for materials, goods and equipment needed in foreign economic and military aid and assistance programs and offshore construction programs. Barters are transacted mainly under authority of the Agricultural Trade Development and Assistance Act of 1954, as amended.

From July 1, 1958, through June 30, 1959, 152 barter contracts totaling $156.2 million were negotiated, of which 151 contracts totaling $153.7 million represented strategic materials for stockpiling. (This compares with contracts totaling $65.1 million for the preceding fiscal year, all for stockpile materials.) The principal commodities which barter contractors exported to friendly countries during the report period were wheat, corn, grain sorghums, barley, oats, cotton, rice, and soybeans.

Materials delivered to the Commodity Credit Corporation in this report period were valued at approximately $183 million, including $141 million in stockpile materials. The total value of deliveries from July 1, 1954, through June 30, 1959, at contract prices was $899 million of which $830 million represented strategic materials for stockpiling.

Strategic and critical materials have been transferred in substantial quantities from CCC inventory to the national stockpile and, as authorized by the Agricultural Act of 1956, to the supplemental stockpile. Cumulative transfers of such materials having an inventory value of $775 million were made from July 1, 1954, through June 30, 1959, and distributed as follows:

The sum of $151 million to the national stockpile, $621 million to the supplemental stockpile, and $3 million to other Federal agencies. CCC has also transferred other materials having a value of $31 million to the International Cooperation Administration. In addition, CCC has honored construction certificates valued at approximately $41 million and is being reimbursed by the Department of Defense from savings in quarters allowances for agricultural commodities which were used to finance military dependent housing in France. The total value of construction certificates to be issued under the French Housing Agreement is $50 million. Utilization of barter for this purpose is in accordance with Public Law 765, 83d Congress, as amended by Public Law 161, 84th Congress. (NOTE.—Above figures include adjustments in the value of transfers shown in previous reports.)

During the reporting period, transfers to the supplemental stockpile totaled $309 million. A balance of strategic materials, valued at approximately $70 million, is being held in CCC's inventories for subsequent transfer to the supplemental stockpile.

The Supplemental Stockpile Advisory Committee for Barter advises the Secretary of Agriculture with respect to the strategic and other materials which he recommends for designation by the President, as acceptable in barter or exchange for agricultural commodities owned by the Commodity Credit Corporation. Also, the Committee recommends to the Secretary of Agriculture, barter procurement quotas, delivery periods for materials, specifications, etc. Among the factors considered by the Committee in making its recommendations are: (*a*) The importance of the material to national defense, (*b*) the potential of the material in providing an outlet for additional quantities of agricultural commodities, (*c*) the supply-demand situation in world and U.S. markets, (*d*) the impact of the proposed barter procurement upon availability of the material to private industry, (*e*) the extent of domestic processing required, and (*f*) the effect of the proposed barter procurement upon expansion of foreign producing and processing facilities.

*(b) Use of foreign currencies for stockpile acquisition and other purposes under title I of Public Law 480*

During the reporting period, no foreign currency was earmarked for the purchase of strategic and critical materials. As of August 15, 1959, earmarkings for common defense total the equivalent of $307.8 million. The total equivalent planned for military family housing is $138.3 million.

*3. Damage assessment*

Activities were directed toward perfecting damage assessment tools and training appropriate personnel in the use of these tools. This was to assure an improved level of ability to do damage assessment work in all administrative

areas in which this activity might be needed, either after attack or in training exercises.

Assistance was given by the Department in conducting damage assessment training sessions in all eight OCDM regions, where several hundred persons were in attendance representing all arms of the Federal Government, including the Department's regional liaison representatives. Special attention was given to radiation problems in these training sessions.

Throughout the year, the Department has supported activities of the National Damage Assessment Center, OCDM.

Primarily, attention is given to the food and agriculture interests of NDAC, but at times activites are widened, particularly in development of general methodology and in applying such methodology to studies in areas which support the food field, such as transportation, energy, manufacturing, manpower, etc. For instance, considerable effort went into helping to develop a study which would indicate probability of survival of any resource point in the United States if this Nation were subject to thermonuclear attack. This type of study will contribute much to preattack defense mobilization planning in food and agriculture as well as in all other parts of the national economy.

*4. Mechanical data processing system*

In order to build an adequate food resource library and to streamline methods of maintaining data, the Department has developed and installed a new mechanical data processing system. The system lists on IBM cards the name, location and pertinent supporting data for food processing, storage and production requisite supplier facilities and makes provision for information to be supplied by field personnel postattack.

The system, installed without staff expansion, established a flexible method of mechanically sorting, summarizing and listing basic food facility data for preattack planning, testing and training, for current operational use and for rapid postattack analysis.

Data are transferred to the National Damage Assessment Center's resource library to be processed by the high speed computer. A master list of location coordinates has been devised permitting automatic entering of a location coordinate for most of the food and agriculture resources by proper geographic coding. Use of the master list represents a tremendous saving of time and increases the number of persons who may enter data. Thus rapid development of a food resource library is anticipated.

The system will provide mechanically printed cards for carrying out hand damage assessment and will give a rapid summary of the consumable food situation when needed.

Sets of cards will be furnished to appropriate planning groups at the national level as well as to field components.

The system represents a major achievement in facilitating defense planning and emergency operations.

*5. Government-industry task group for postattack production*

There has been continuing participation in an advisory capacity in the study being conducted by the Department of Commerce on the effect of nuclear attack on industrial production in New York City under a varying set of assumptions.

*6. Cooperation with engineer research and development laboratory*

Recently assistance has been extended to a project being carried on by selected officers at Engineer Research and Development Laboratories, Fort Belvoir, Va. It concerns military field problems in which data from atomic effects research carried out by the Department's Forest Service are being utilized.

*7. Semi-automatic ground environment (SAGE)*

In fiscal years 1958 and 1959, REA loaned about $3.5 million to rural telephone systems for service to defense installations, such as SAGE, FAA, Air Force bases, and missile sites. During 1960, REA will have for consideration loan applications including about $17.5 million for these purposes. SAGE installations will be located in the areas of REA telephone borrowers. Most of these will be operational by the end of fiscal year 1960. REA has continued to work closely with the Department of Defense and the telephone industry on these projects.

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*8. Educational series*

An educational program available to Department personnel and geared to interests of those engaged in defense planning has been established. The program involves lectures by specialists in various fields related to defense.

Subjects covered as the series began were "Effects and Threats of Communism in the Far East" and "Radioactive Fallout in Agriculture in Time of Emergency."

*9. Operation Alert 1959*

The purpose of the Department's participation in Operation Alert 1959 was to improve its ability to cope with an emergency resulting from attack and to strengthen working relationships and develop operating procedures between the Department and non-Federal Government units at local and State levels and between Federal agencies at the regional level. The Department participated in the local phase (May 8 and 9) through the Agricultural Stabilization and Conservation county offices and in the State phase through ASC State offices and representatives of the Agricultural Marketing Service. In the local and State phases participants were asked to familiarize themselves with the food guidelines and discuss them with local and State civil defense organizations. (The food guidelines are excerpts from the national food plan to the national plan for civil defense and defense mobilization and they stress the postattack relationships and responsibilities of the Department and State and local governments.)

The Department furnished participants at the State and regional levels, food supply and requirements data used in Operation Alert 1958, revised in terms of the first 30 days after attack and the subsequent 60 days. Similar data for fuel and energy requirements, transportation requirements, and manpower estimates for agriculture were also furnished.

Results of the local and State phases indicate that a better understanding or agreement with local and State civil defense officials must be reached concerning emergency food management responsibilities. The lack of delegations, background information, training and detailed instructions at this level was emphasized.

At the regional level, emphasis was placed (1) on a clear understanding of working relationships between USDA regional liaison representatives and OCDM regional staff and (2) on the effects of fuels and energy, manpower, and transportation on food availability in a postattack period.

The regional liaison representatives and selected staff members met with OCDM regional directors and representatives of other agencies at the various OCDM regional headquarters locations on July 8, 9, and 10. Although it was impossible in most cases to make a complete analysis of the effects of one resource on another during this period, it was clear that a lack of manpower and fuels could have a serious effect on food under some circumstances. Transportation would also be a problem. There was no disagreement in any region on the proper working relations between the Department and OCDM. The results of the regional exercise furnished valuable material for the exercise at the national level.

The national phase of Operation Alert 1959 was held at the Department's relocation site August 24, 25, and 26. This phase was carried out through the use of four seminars dealing with problems of (1) food and supporting requisites, (2) rural fire defense, (3) biological and chemical warfare and special fallout defense, and (4) organizational and administrative matters.

Seminar discussions singled out areas of deficiency and provided stimulation for future planning.

Department representatives also participated in the national exercise at the main relocation site of OCDM. Answers to problems discussed at the OCDM site during this period conformed for the most part to conclusions arrived at independently by the Department. These conclusions will form a valuable basis for further planning in the week's ahead.

*Findings of Opal 1959*

1. Experiences of USDA participation in Opal 1959 at the State and county level clearly show that with few exceptions, States and localities do not have plans for carrying out their responsibilities for equitable distribution of food to consumers at the retail level.

2. There was, with few exceptions, an almost complete lack of understanding by the State and local official of what postattack actions should be given priority attention. In an immediate postattack period, there would be many competing demands for remaining resources such as petroleum, manpower, and transportation. There is urgent need for developing policy guidance for use in the allocation of remaining resources. There is also urgent need to develop a capability at all levels to carry out such policy guidance.

3. There is urgent need for clarification and better understanding of the responsibilities, relationships, and the authorities of State and Federal agencies in the emergency management of food at the State and local level.

### IV. Effectiveness of Program

Definite progress has been made in the development of adequate defense plans by the Department and continued experience increases effectiveness. Test exercises in which the Department participates point out areas in which planning can be improved and are considered the best method yet devised to determine our capabilities. The development of the national plan for civil defense and defense mobilization has provided an outline against which we may evaluate progress and measure effectiveness.

### V. Current Need for Program

The need for a vigorous defense planning program has been emphasized by the President in the issuance of the national plan for civil defense and defense mobilization. In order to carry out its assigned responsibilities, the Department must strengthen the plans which make possible the transition from an agency administering peacetime programs to an emergency operations organization. To accomplish this, the program must be continually assessed and improved.

### VI. Programs as Related to Small Business

It is the practice of the Department to cooperate with the Small Business Administration in the formulation of policies which affect small business in any manner.

Departmental programs are geared to the needs of the small family farmer and in turn affect the small businessman in the rural community in which the farmer lives. The Department is equipped to assist the farmer in applying new programs, methods and techniques to his particular situation and to help him to adjust his planning to changing conditions. Many activities of the Department have been of direct benefit to the farm community. For example, rural electrification has made possible extensive farm improvements and a new way of farm life, just as the rural development program has provided opportunities for many small low-income farmers.

### VII. Major Problems

The Department's defense planning in the past has been primarily national and and little has been done at the local level. Plans are being made for converting the present field organization of the Department to a structure which would be used in event of emergency. As work in this area is finalized, policy guidance issued, personnel assignments made, and training plans evolved, greater stimulation and motivation will be provided at all levels, with improved overall capability.

Several problems exist in the area of nonfood materials and facilities, some of which will be solved by the establishment of a field organization. There is a need for policy on the local distribution of nonfood requisites; field capability is lacking to which to delegate responsibility to handle these requisites at the local level; there is no priority with respect to distribution of nonfood items between agricultural programs.

Channels through which the Department would receive postattack information concerning nonfood resources must be strengthened. A true evaluation of the emergency food situation could not be made without complete reports covering foods and services essential to food production, processing, and distribution.

There are no adequate plans to assure needed postattack priorities or other assistance necessary to the movement of food. The transportation field appears to be one of the areas most in need of coordination of authority to develope a capability for postattack operation.

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### VIII. Changes in Mobilization Planning and Readiness To Meet Emergencies

There has been increased emphasis during the year on training personnel and developing and testing plans in cooperation with OCDM and other agencies. These activities strengthen our readiness capability.

Initiation of the radiological motitoring system during the year places the Department in a position to add to its postattack utility.

Contributions have been made to the development of appropriate annexes to the national plan as well as to a revised assignment of defense functions to the Department. While these documents will not basically change our concept of defense planning, they will give impetus to the program.

### IX. Postattack Availability of Food With Reference to Transportation

Continuing studies of potential postattack food problems substantiate the previous conclusion that any local postattack food shortages are more likely to result from disruption of transportation by blast and fallout and other distribution problems than from national shortages of food supplies. Agriculture normally uses about 25 percent of all the ton-miles of truck and railroad transportation. Postattack, it would be essential for transportation of minimum amounts of food to be given the highest priority for available transportation facilities. To have a capability to move food postattack will require preattack detailed planning to assure that essential transportation will be available for movement of food.

During Opal 1959, the Department made a special analysis to determine the amounts of transportation that would be needed to move food in a postattack situation. These requirements estimates were supplied to OCDM regional offices to ascertain if and how they could be met. The OCDM was unable to determine, in the exercise, whether or not these transportation requirements could be met in an emergency such as was assumed in Opal 1959.

A study has been prepared titled "Food Transportation Factors in a National Emergency." This publication presents a summary of available information in regard to the volume and distance of various food movements in a recent year. It presents comparisons between truck and rail movements and analyzes some of the factors that would be significant in promoting efficiency in emergency movement of foods. Copies of this study are available.

### X. Summary of Standby Programs for Any Future Emergency

The USDA has a large number of operating programs which could be converted to use in an emergency with very little difficulty. Similarly, the personnel now used in the administration of these programs could be used in the administration of emergency programs. Thus, the Department automatically has a built-in standby capability. However, to facilitate this conversion from normal to emergency operations it is also necessary to have some standby emergency plans.

During the year the OCDM issued the national plan for civil defense and defense mobilization to which USDA made contributions. USDA completed its work on the national food plan (annex 31 of the national plan) and the plan is now in the final stages of review prior to issuance. The plan defines the relative responsibilities of USDA, State and local governments, farmers, and the public in carrying out an emergency food program. It was tested to some extent in Operation Alert 1959 at all levels.

The Department has contributed significantly during the year to the national fire protection plan (annex 21) and the national biological and chemical warfare defense plan (annex 24). Other annexes have been reviewed and comments furnished to OCDM.

The Department participated in the further review and refinement of the plan D-minus which relates to actions which would be needed in the event of an attack on the United States. Specific standby plans and orders to implement the various action steps relating to food, rural fire defense, and the effect of radiological fallout were tested and reexamined during Operation Alert 1959.

### XI. Changes in Organization During the Past Year

No significant changes in organization for defense planning occurred during the past year. The defense planning policy is the responsibility of the Under Secretary; plans relating to ability of the Department to continue to function in an emergency are developed under the direction of the Administrative Assistant Secretary; and the general coordination of defense planning in the Department is the responsibility of the Food and Materials Requirements Division of the Commodity Stabilization Service. Planning at the national level continues to be carried out through defense planning committees which also serve as a medium for quickly mobilizing the extensive existing capability of the Department in the event of an emergency.

Assistance in planning at the regional level has been provided by the regional liaison representatives.

Defense planning groups at State and county levels of the Department will be available when further refinements have been made in the field organization which the Department will use in an emergency.

Work on the emergency field organization is progressing.

### XII. Future Objectives

In addition to continuing to carry out present defense planning activities, the U.S. Department of Agriculture is placing emphasis during the year 1960 on the following:

Wide dissemination of the national food plan as soon as it is approved.

Completion of the emergency field organization of the Department with assignment of responsibilities and delegation of authority.

Carrying out a training program for those employees at headquarters and field levels who have emergency responsibilities.

Contacting State and local governments to develop a complete mutual understanding, based on the national food plan, of the way in which the food program will be carried out in event of an emergency. This includes encouraging State and local governments to develop capability to distribute food and other resources at the retail level. It will also require ability to judge the relative importance of various essential uses in a postattack period.

### XIII. Availability of Funds for Defense Needs

Due to absence of any special defense funds during the past year, all expenses of defense planning to the Department were absorbed. While the Department will continue to absorb costs directly related to its regular program responsibilities, a need has grown for certain special activities such as those relating to radiological monitoring and full-time regional representatives. Special funds for these and a few other purposes were requested in the fiscal year 1960.

### XIV. Manner in Which Programs Fit Into a Defense Plan and Objectives To Be Achieved

In formulating plans necessary to provide food under emergency conditions and plans relating to defense against unconventional warfare and rural fire

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hazards, the Department has maintained close working relationships with the OCDM and its predecessor agencies. Guidelines for these activities were furnished by the provisions of defense mobilization order I–9 and Federal civil defense administration delegation 2. While issuance of a proposed Executive order superseding these two directives will clarify and redefine assignments, no basic changes are anticipated. The Department will continue its coordination with the OCDM so that its planning objectives will be consistent with the Nation's total defense effort.

EXHIBIT 1

VULNERABILITY OF FARM COMMODITIES OWNED BY CCC

The Commodity Credit Corporation owns substantial quantities of agricultural products, mostly cotton and grains. It is the policy of the Department of Agriculture to locate these stocks in places of relatively low vulnerability, with respect to attack by nuclear weapons.

As indicated by chart 1, more than 80 percent of the stocks owned by the CCC, except rice and dairy products, are outside of the critical target cities. The CCC owns relatively small amounts of rice and dairy products. There was relatively little change in these proportions of CCC stocks in vulnerable areas between December 31, 1957, and December 31, 1958.

The percent of CCC stocks in each critical target city is indicated by maps 1 to 7, the percent being in proportion to the area of the circle at the location of that city. These maps are based on unpublished data. CCC stocks of cotton held in vulnerable areas, for example, are largely in Memphis, with smaller amounts in Dallas, Fort Worth, Houston, and New Orleans. CCC stocks of cotton in relatively safe places are shown on the map as a total for each State. Stocks of wheat in critical target cities are largely in Minneapolis, Buffalo, Kansas City, and Wichita.

A summary of quantities of farm commodity stocks is shown on table 1. The stocks in various positions are compared with the total civilian requirements in 1958. Stocks held by the CCC are generally more than 20 percent of the annual requirements for domestic use of wheat, rice, corn, barley, and grain sorghum. Quantities otherwise held for price support (not owned by the CCC) are held mostly under loans for the purpose of supporting farm prices. More than 20 percent of the total annual requirements of most of these farm commodities are held under loans. Relatively small proportions of annual needs of corn, oats, and dairy products, however, are held for price support, other than the stocks owned by the CCC. The total stocks of these commodities in all positions on December 1, 1958, were relatively large, generally being more than enough to meet all domestic requirements during an entire year.

In summary, this analysis demonstrates that relatively small proportions of the commodities held by the CCC are located in critical target areas, and that the total stocks of cotton, grains, and tobacco are large in relation to annual requirements for domestic use. Also, there has been relatively little change in proportions of CCC owned stocks of these commodities in vulnerable areas during the 12 months ending December 31, 1958.

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TABLE 1.—*Utilization and stocks of specified farm commodities in the United States and how stocks were held on Dec. 31, 1958*

[Amounts are millions of units]

| Commodity | Unit of measure | Domestic civilian use [1] | Total stocks | | CCC stocks [2] | | Other price support [2] | | Other stocks | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Amount | Percent of 1958 use | Amount | Percent of 1958 use | Amount | Percent of 1958 use | Amount | Percent of 1958 use |
| Cotton | Bale | 8.5 | 14.4 | 169.4 | 1.6 | 18.8 | 5.1 | 60.0 | 7.7 | 90.6 |
| Dairy products | Pound | 3,848.0 | 665.0 | 17.3 | 2,225.5 | 5.9 | 0 | 0 | 439.5 | 11.4 |
| Butter | do | 1,446.0 | 69.0 | 4.8 | 56.1 | 3.9 | 0 | 0 | 12.9 | .9 |
| Cheese | do | 1,455.0 | 289.0 | 19.9 | 14.4 | 1.0 | 0 | 0 | 274.6 | 18.9 |
| Nonfat dry milk | do | 947.0 | 307.0 | 32.4 | 155.0 | 16.4 | 0 | 0 | 152.0 | 16.0 |
| Dry beans | Hundredweight | 14.6 | 12.0 | 82.2 | (3) | (3) | 2.7 | 18.5 | 9.3 | 63.7 |
| Wheat | Bushel | 613.0 | 1,815.8 | 296.2 | 777.1 | 126.8 | 473.8 | 77.3 | 564.9 | 92.2 |
| Rice (rough basis) | Hundredweight | 13.8 | 36.0 | 260.9 | 7.1 | 51.4 | 6.6 | 47.8 | 22.3 | 161.6 |
| Corn | Bushel | 2,930.0 | 3,925.9 | 134.0 | 1,168.0 | 39.9 | 248.5 | 8.5 | 2,509.4 | 85.6 |
| Other grains | do | 2,393.6 | 2,683.8 | 112.1 | 400.8 | 16.7 | 445.2 | 18.6 | 1,837.8 | 76.8 |
| Oats | do | 1,284.0 | 1,048.7 | 81.7 | 26.2 | 2.0 | 70.5 | 5.5 | 952.0 | 74.1 |
| Barley | do | 334.0 | 389.6 | 116.6 | 71.7 | 21.5 | 82.4 | 24.7 | 235.5 | 70.5 |
| Rye | do | 24.0 | 24.3 | 101.2 | 2.0 | 8.3 | 6.9 | 28.8 | 15.4 | 64.2 |
| Grain sorghums | do | 337.0 | 721.4 | 214.1 | 287.7 | 85.4 | 180.1 | 53.4 | 253.6 | 75.3 |
| Flaxseed | do | 27.6 | 30.7 | 111.2 | 0 | 0 | 8.5 | 30.8 | 22.2 | 80.4 |
| Soybeans | do | 387.0 | 469.1 | 121.2 | 13.2 | 3.4 | 86.7 | 25.0 | 359.2 | 92.8 |
| Tobacco | Pound | 1,548.0 | 4,981.0 | 321.8 | 0 | 0 | [4] 1,078.0 | 69.6 | 3,903.0 | 252.1 |

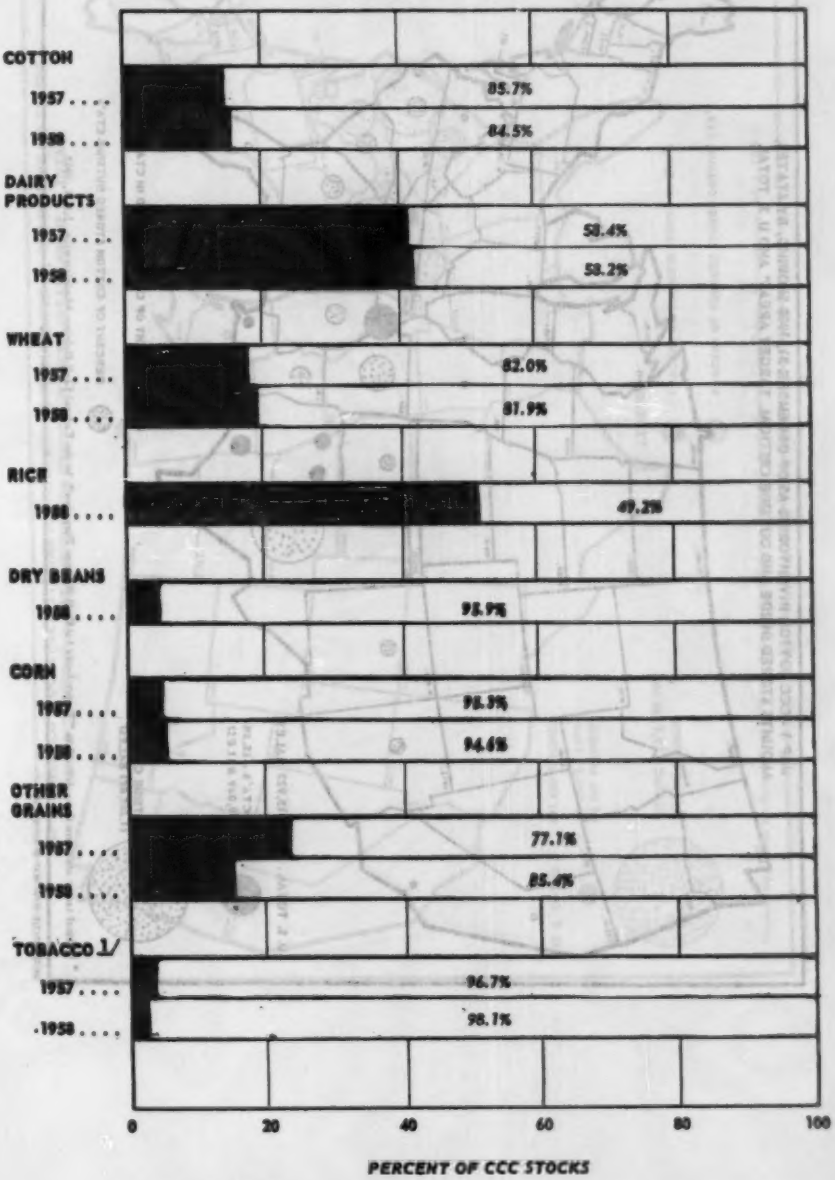
[1] Domestic civilian use does not include amounts used by offshore areas of the United States, or for export.

[2] Based on data from "Report of Financial Condition and Operations" by the Commodity Credit Corporation.

[3] Negative.

[4] These tobacco stocks are held by loan associations and not by CCC.

CHART 1 - LOCATION OF CCC OWNED STOCKS OF FARM COMMODITIES WITH RESPECT TO CRITICAL TARGET AREAS, DECEMBER 31 OF 1957 AND 1958




1/ Tobacco stocks are held by loan associations.

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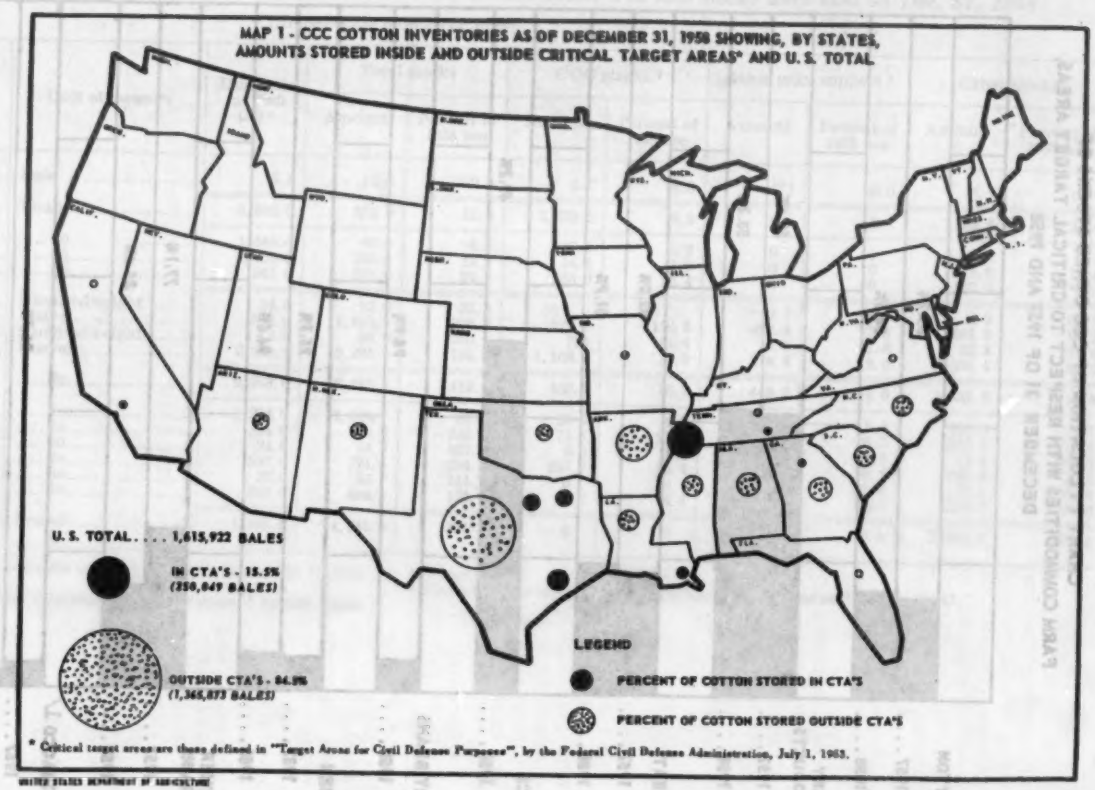
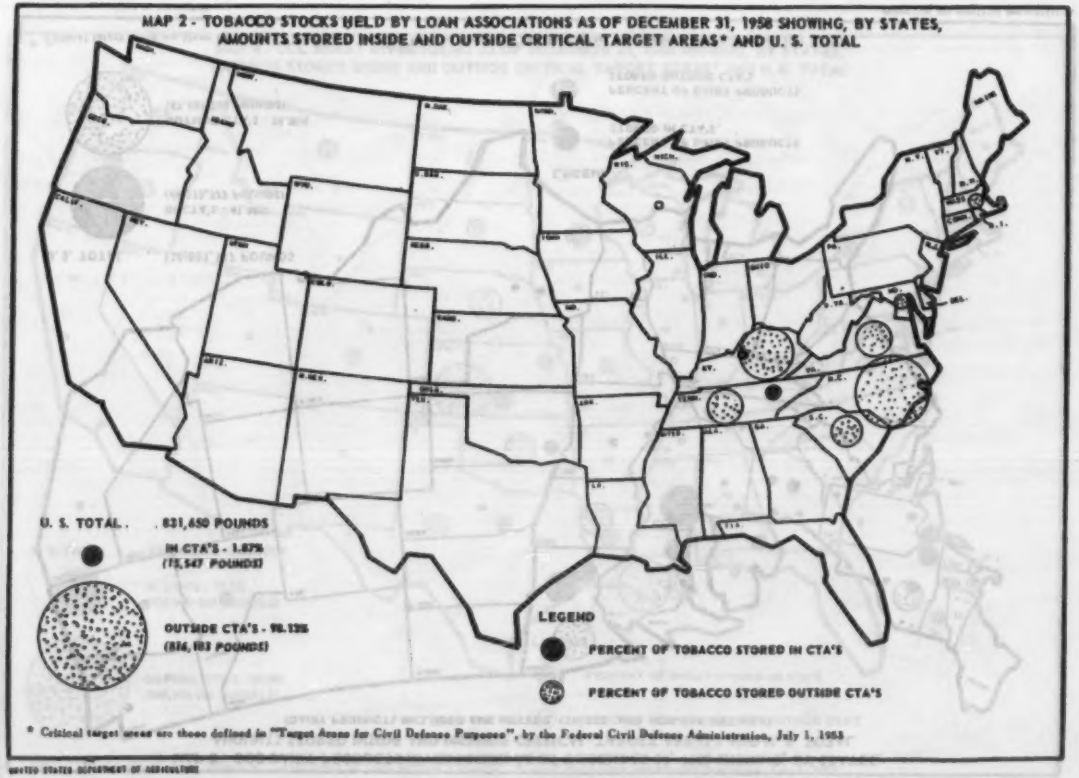

MAP 1 - CCC COTTON INVENTORIES AS OF DECEMBER 31, 1958 SHOWING, BY STATES, AMOUNTS STORED INSIDE AND OUTSIDE CRITICAL TARGET AREAS* AND U. S. TOTAL
U. S. TOTAL. . . . 1,615,922 BALES
IN CTA'S - 15.5% (250,049 BALES)
OUTSIDE CTA'S - 84.5% (1,365,873 BALES)
LEGEND
PERCENT OF COTTON STORED IN CTA'S
PERCENT OF COTTON STORED OUTSIDE CTA'S
* Critical target areas are those defined in "Target Areas for Civil Defense Purposes", by the Federal Civil Defense Administration, July 1, 1955.

MAP 2 - TOBACCO STOCKS HELD BY LOAN ASSOCIATIONS AS OF DECEMBER 31, 1958 SHOWING, BY STATES, AMOUNTS STORED INSIDE AND OUTSIDE CRITICAL TARGET AREAS* AND U. S. TOTAL


U. S. TOTAL . . 831,650 POUNDS
IN CTA'S - 1.87%
(15,547 POUNDS)
OUTSIDE CTA'S - 98.13%
(816,103 POUNDS)
LEGEND
PERCENT OF TOBACCO STORED IN CTA'S
PERCENT OF TOBACCO STORED OUTSIDE CTA'S

* Critical target areas are those defined in "Target Areas for Civil Defense Purposes", by the Federal Civil Defense Administration, July 1, 1955

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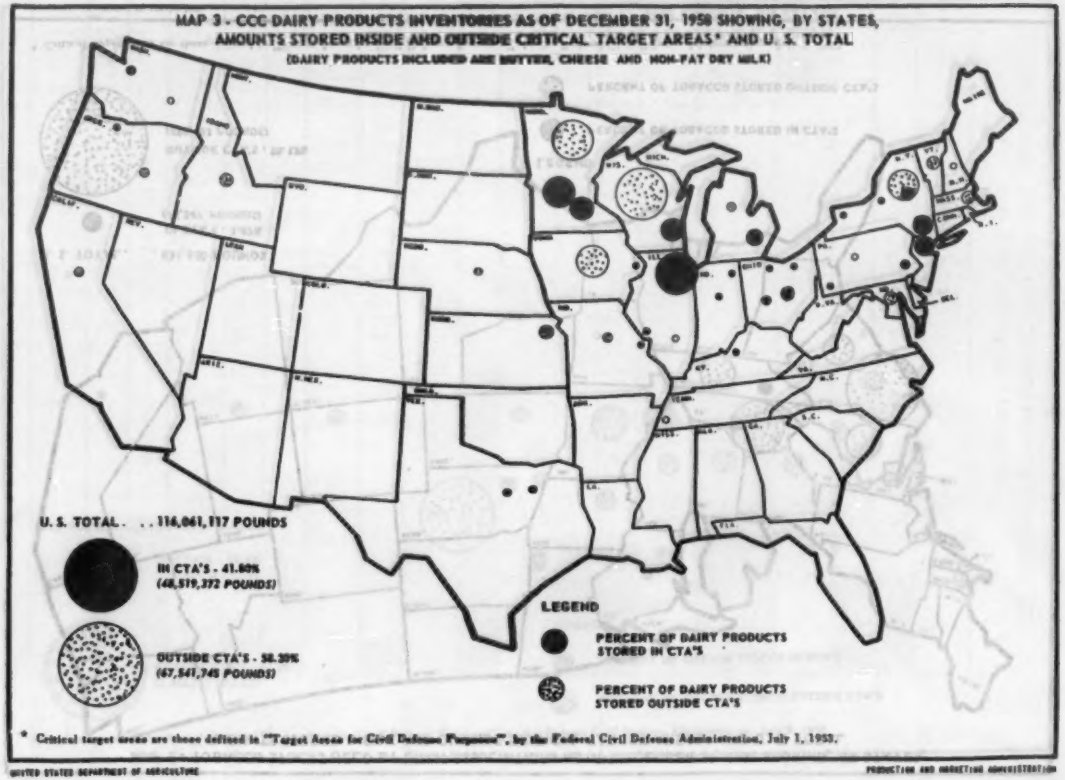
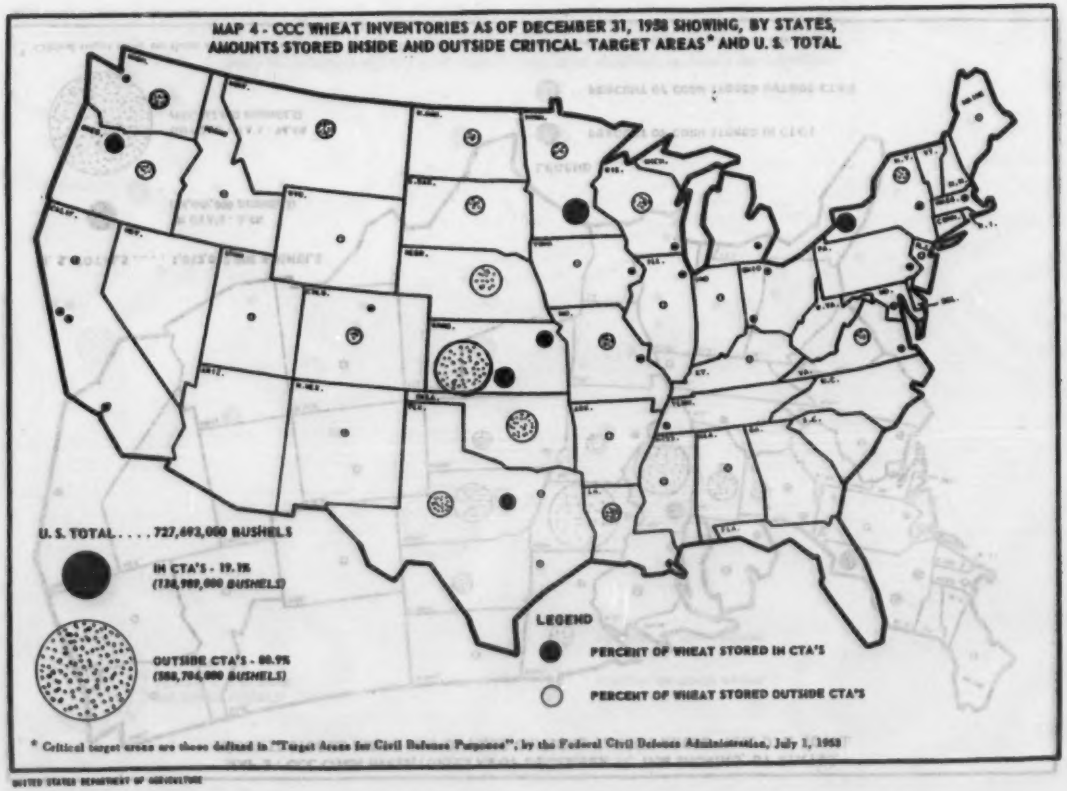
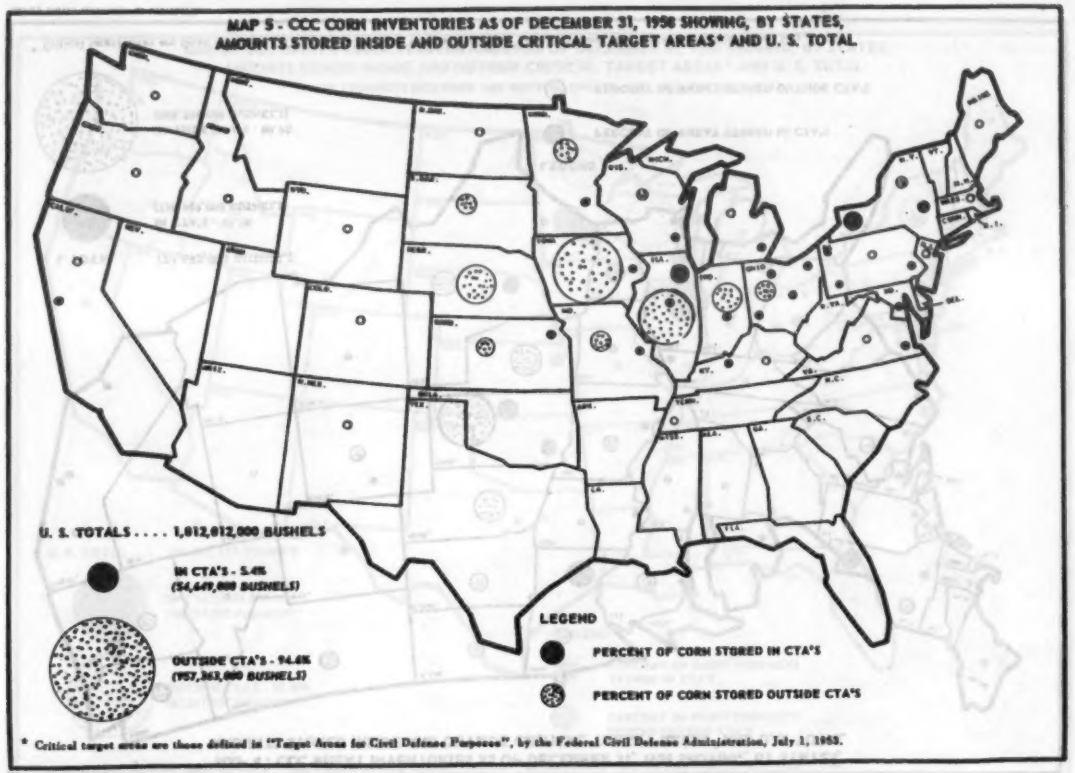

MAP 3 - CCC DAIRY PRODUCTS INVENTORIES AS OF DECEMBER 31, 1958 SHOWING, BY STATES, AMOUNTS STORED INSIDE AND OUTSIDE CRITICAL TARGET AREAS* AND U. S. TOTAL
(DAIRY PRODUCTS INCLUDED ARE BUTTER, CHEESE AND NON-FAT DRY MILK)
U. S. TOTAL . . . 116,061,117 POUNDS
IN CTA'S - 41.80%
(48,519,372 POUNDS)
OUTSIDE CTA'S - 58.20%
(67,541,745 POUNDS)
LEGEND
PERCENT OF DAIRY PRODUCTS STORED IN CTA'S
PERCENT OF DAIRY PRODUCTS STORED OUTSIDE CTA'S
* Critical target areas are those defined in "Target Areas for Civil Defense Purposes", by the Federal Civil Defense Administration, July 1, 1958.
UNITED STATES DEPARTMENT OF AGRICULTURE
PRODUCTION AND MARKETING ADMINISTRATION

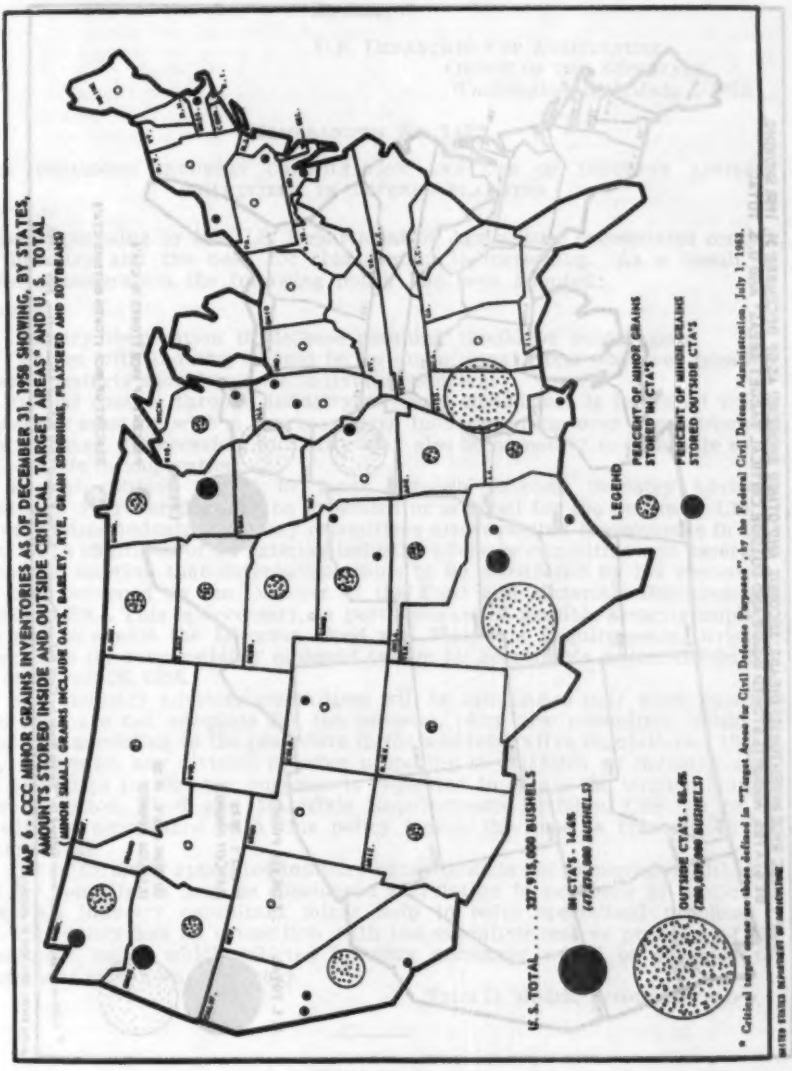

MAP 4 - CCC WHEAT INVENTORIES AS OF DECEMBER 31, 1950 SHOWING, BY STATES, AMOUNTS STORED INSIDE AND OUTSIDE CRITICAL TARGET AREAS* AND U. S. TOTAL
U. S. TOTAL . . . . 727,693,000 BUSHELS
IN CTA'S - 19.1%
(134,989,000 BUSHELS)
OUTSIDE CTA'S - 80.9%
(588,704,000 BUSHELS)
LEGEND
PERCENT OF WHEAT STORED IN CTA'S
PERCENT OF WHEAT STORED OUTSIDE CTA'S
* Critical target areas are those defined in "Target Areas for Civil Defense Purposes", by the Federal Civil Defense Administration, July 1, 1950
UNITED STATES DEPARTMENT OF AGRICULTURE

MAP 5 - CCC CORN INVENTORIES AS OF DECEMBER 31, 1958 SHOWING, BY STATES, AMOUNTS STORED INSIDE AND OUTSIDE CRITICAL TARGET AREAS* AND U. S. TOTAL

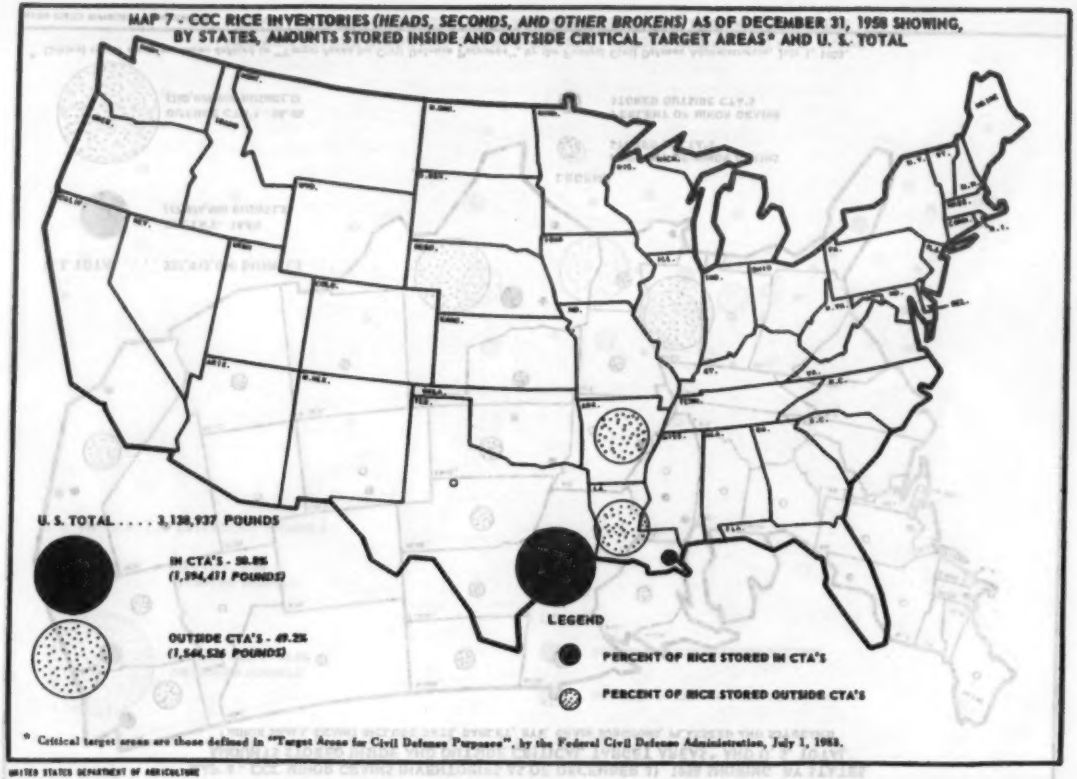



* Critical target areas are those defined in "Target Areas for Civil Defense Purposes", by the Federal Civil Defense Administration, July 1, 1955.

UNITED STATES DEPARTMENT OF AGRICULTURE


MAP 6 - CCC MINOR GRAINS INVENTORIES AS OF DECEMBER 31, 1950 SHOWING, BY STATES, AMOUNTS STORED INSIDE AND OUTSIDE CRITICAL TARGET AREAS* AND U. S. TOTAL
(MINOR SMALL GRAINS INCLUDE OATS, BARLEY, RYE, GRAIN SORGHUMS, FLAXSEED AND SOYBEANS)
U. S. TOTAL . . . . . 227,915,000 BUSHELS
IN CTA'S - 14.4%
(47,674,000 BUSHELS)
OUTSIDE CTA'S - 85.6%
(180,241,000 BUSHELS)
LEGEND
PERCENT OF MINOR GRAINS STORED IN CTA'S
PERCENT OF MINOR GRAINS STORED OUTSIDE CTA'S
* Critical target areas are those defined in "Target Areas for Civil Defense Purposes", by the Federal Civil Defense Administration, July 1, 1952.
UNITED STATES DEPARTMENT OF AGRICULTURE

MAP 7 - CCC RICE INVENTORIES *(HEADS, SECONDS, AND OTHER BROKENS)* AS OF DECEMBER 31, 1958 SHOWING, BY STATES, AMOUNTS STORED INSIDE AND OUTSIDE CRITICAL TARGET AREAS * AND U. S. TOTAL


U. S. TOTAL . . . . 3,138,937 POUNDS
IN CTA'S - 50.8%
(1,594,411 POUNDS)
OUTSIDE CTA'S - 49.2%
(1,544,526 POUNDS)
LEGEND
PERCENT OF RICE STORED IN CTA'S
PERCENT OF RICE STORED OUTSIDE CTA'S

* Critical target areas are those defined in "Target Areas for Civil Defense Purposes", by the Federal Civil Defense Administration, July 1, 1958.

UNITED STATES DEPARTMENT OF AGRICULTURE

EXHIBIT 2

U.S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
*Washington, D.C., July 1, 1959.*

MEMORANDUM No. 1432

POLICY REGARDING INDUSTRY CONSULTATION AND USE OF INDUSTRY ADVISORY COMMITTEES IN DEFENSE PLANNING

*1. Purpose*

Defense planning by the U.S. Department of Agriculture necessitates contact with industry and the need for this contact is increasing. As a result of careful consideration the following policy has been adopted:

*2. Policy*

A. Industry cooperation in defense planning should be encouraged.

B. Contact with industry should be on an informal basis wherever possible, but such contacts should be with individual concerns.

C. Formal contact through industry advisory committees is indicated where the contact must be with a representative industry group over a considerable period of time. On occasion, formality may also be necessary to eliminate some legal obstacle to cooperation.

D. Formal contact should be made through existing industry advisory committees wherever they can be expanded or adapted for the purpose. Chairmen of existing industry advisory committees are requested to cooperate in this effort. The chairman of an existing industry advisory committee will ascertain before any meeting that defense questions to be considered by his committee have been screened by the Director of the Food and Materials Requirements Division, CSS. This is necessary, in part, because of possible security implications and to enable the Director, Food and Materials Requirements Division, to discharge the responsibility assigned to him by Secretary's memorandum No. 1427 of August 26, 1958.

E. New industry advisory committees will be established only when existing committees are not adequate for the purpose. Any new committee would be established according to the procedure in the administrative regulations (10 AR 916). However, any division or office proposing to establish an industry advisory committee for defense purposes is requested to obtain the written opinion of the Director, Food and Materials Requirements Division, CSS, as to its necessity in accordance with this policy before the case is transmitted for final approval.

F. Use of formally appointed industry consultants is not encouraged, although need for consultants may be considered in relation to problems in particular cases. An industry consultant might help to solve specialized problems.

G. This policy has no connection with the executive reserve program of the Government under which selected industry personnel would be groomed for Government jobs in an emergency.

TRUE D. MORSE, *Acting Secretary.*

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EXHIBIT 3

THE SUPPLY SITUATION—NONFOOD MATERIALS, FACILITIES AND MANPOWER

*Farm equipment*

New farm machinery and equipment, including tractors, was in plentiful supply throughout the year. The overall quantity shipped by manufacturers was larger than for any similar period since the peak shipment years of 1951 and 1952. Current inventories are approximately normal for the season.

The supplies of all petroleum fuels used by farmers and food processors have been adequate throughout the year. Supplies in terms of crude oil and net imports of products are about 13 percent higher during the first 5 months of 1959 than during the same period last year. Gasoline prices on an average to farmers increased 0.1 cent per gallon at filling stations during the 12-month period, and tank truck prices increased on an average of 0.2 cent. Diesel tractor fuel increased in price during the year by 0.5 cent per gallon.

Supplies of motor vehicles have been adequate during the year. Commercial truck production during the first 6 months of 1959 ran well ahead of that for the same period last year. Trucks of all kinds were more than 50 percent ahead, and light truck production exceeded last year's by more than 60 percent. Sales of passenger cars from factories, mostly to dealers, were about 45 percent above the first 6 months of last year. Prices of trucks to farmers increased 2 to 3 percent during the year, and passenger cars from 3 to 5 percent.

Tires of all kinds used by farmers have been in adequate supply during the year. Indications are that this situation will continue. At the end of June, there were almost 240,000 large tractor tires in inventory and nearly 450,000 small tractor and implement tires representing a small increase over a year earlier. At the same time, truck tires of 8-ply and under inventoried almost 1½ million; this was about the same as a year ago.

Two rubber developments have been announced during the year which should be of interest to agriculture. One is the development of a synthetic rubber which has all the properties of natural rubber, and to a minor extent is taking the place of natural in truck tires. Then, more recently, tires have been made from butyl, the rubber ordinarily used for inner tubes. Butyl tires are described as having some improved qualities, such as better traction, and no squeal.

Farmers had no difficulty in locating the building materials they needed during the year. Practically all such materials for which prices to farmers are available increased in price during the year. Some of the sharpest rises in price came on the more common types of lumber, such as 2 by 4's, rough and dressed boards, and siding.

The value of new farm construction during the first 7 months of 1959 was about 11 percent higher than for a like period in 1958. It amounted to $1 billion compared to $899 million.

*Fertilizers*

"The Fertilizer Situation for 1958–59," published in April 1959 forecast supplies of the primary plant nutrients 8 percent greater than in 1957–58. Weather conditions were good and unusually heavy movements continued through May and into late June so supplies probably exceeded the forecast.

Even though production capacity is ample and available supplies adequate, the very pronounced seasonal demand and movement of fertilizer resulted in temporary shortages and overloading of handling and transportation facilities. Shifts in types and forms of fertilizer materials needed for both mixed fertilizer manufacture and direct application made it difficult for primary producers to plan production of the various materials.

Farmers have been reluctant to store solid fertilizers except when it was necessary to insure a supply. Farmers and mixers are even less prepared to store liquids which are becoming a greater share of the total fertilizer supply. The solution to this problem seems to be for primary producers to provide the necessary storage for liquids as has been done in recent years for solids.

One producer has recently installed a reinforced concrete tank for storage of over 1 million gallons of wet-process phosphoric acid. Some producers are convinced additional storage capacity for liquid nitrogen materials is necessary. Solution of peacetime storage problems in the fertilizer industry could serve to considerable advantage during an emergency.

The produtive capacity of the fertilizer industry continues to grow. Synthetic nitrogen capacity is estimated to be 4,122,000 tons while total nitrogen capacity is around 4,400,000 tons. Urea capacity, at present 796,000 tons of materials will be increased to about 920,000 tons when three plants under construction are completed. A net increase of about 155,000 tons of $P_2O_5$ capacity was added during the year, bringing the total to 4,906,000 tons of $P_2O_5$. Domestic potash capacity remained unchanged at about 2,500,000 tons of $K_2O$. Two domestic producers are actively developing facilities in Canada.

*Pesticides*

Production of pesticides in 1958 was well above the 1957 level although below 1956. DDT production was at an all-time high of 143 million pounds, about half of which was exported, largely for foreign aid programs of malaria control. Benzene hexachloride production was down considerably in 1958 over 1957. Organic phosphorus insecticides continue to increase in volume of sales and in diversity of kind and use. Exports of copper sulfate for the control of disease of bananas in Latin America dropped sharply in 1958 due to the substitution of

petrolum oil fractions. Solid diluents, such as talc and fullers' earth, used in pesticide formulation in 1958, amounted to 233,703 short tons.

*Food processing and containers*

In the broad field of food containers, there are continuing new developments in materials, production methods, types of containers, as well as advances in automation and materials handling.

Investigation made prior to the steel work stoppage indicated container manufacturers were stockpiling container materials as protective measures against effects of a possible work stoppage. It is believed that unless production is interrupted for a considerable period of time, little effect will be noted in the food canning industry. Should the steel work stoppage be of prolonged duration, however, certain areas where late season or continuous canning operations occur may experience some difficulty.

There appears little likelihood that the food processing or distribution industry will be adversely affected by the present steel work stoppage.

*Manpower*

Total crop production during 1958 exceeded all previous levels and record high yields were general. The fall harvest period came to a close in most areas aided by dry and generally mild November weather. Farm wage rates increased somewhat with the composite rate per hour being 79.5 cents in October 1958 as compared to 75.7 cents in the same month in 1957.

Labor supplies to meet the 1958 fall harvest needs were generally adequate. However, the U.S. Department of Labor found it necessary to supplement the inadequate supplies of domestic workers with foreign workers, the major portion of which came from Mexico. During 1958, 432,000 Mexican nationals were contracted for agricultural employment in the United States.

Total crop production prospects for 1959 edged upward during July to within 3 percent of last year's outstanding record, according to the Crop Reporting Board. The all-crop production index rose to 115, only three points below the unprecedented height of 118 last year. Total feed grain tonnage seems likely to nearly equal last year. A cotton crop 29 percent above last year's small production is in prospect with a record high yield on nearly a fourth more acreage.

Labor supplies have been generally adequate to meet 1959 needs to date. However, the need for foreign labor continues. As of August 15, over 230,000 Mexican nationals have been contracted since the first of the year as compared with 197,236 on the same date last year. Small numbers of Bahamians and Jamaicans are being used in the Estern States and it is anticipated that workers from Canada will again be used in the Maine potato harvest. Some critical shortages of labor are beginning to show up as a result of a bumper crop of tree fruits, especially apples and the extended period of high temperatures which is causing crops such as tobacco to mature more rapidly than normal.

There were 8½ million workers employed on farms during the week of July 19–25. This was 4 percent less than a year earlier and 8 percent fewer than the average for comparable dates for the last 5 years and 9 percent less than the 5-year average, while the hired farm work force was 6 percent smaller than a year earlier and also 6 percent smaller than the 5-year average for this time. The composite wage rate per hour on July 1, 1959, was 79.6 cents as compared to 72.8 cents on July 1, 1958.

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EXHIBIT 4

U.S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
*Washington, D.C., May 22, 1959.*

MEMORANDUM No. 1430

RESPONSIBILITIES FOR RADIOLOGICAL MONITORING

*1. Purpose*

By delegations from the Office of Civil and Defense Mobilization, the Department, in time of national emergency caused by hostile attack, will be responsible for administration of an emergency food and agriculture program. In the furtherance of such delegations and the carrying out of the Department's regular programs, this memorandum assigns responsibilites in the Department for leader-

ship in developing, coordinating, and directing a nationwide monitoring system on radioactive fallout as it concerns:

(*a*) agricultural lands, including forest lands;
(*b*) water used for agricultural purposes;
(*c*) agricultural commodities stored or harvestable on farms and ranches;
(*d*) livestock (including poultry);
(*e*) meat and meat products and poultry and poultry products; and
(*f*) agricultural commodities and products owned by CCC and the USDA

*2. Policy*

It is the policy of the Department to provide an orderly and effective means for supplemental assistance to the local, State and National civil defense authorities in determinig the extent of and alleviating damage resulting from radioactive fallout as it relates to the items listed above. To this end agencies assigned responsibilities by this memorandum shall mutually endeavor to formulate an integrated plan of action by the Department. In carrying out these responsibilities agencies will recognize the need for consulting with other departments and agencies having responsibilities for radiological defense activities.

*3. Radiological monitoring*

A Federal network of fixed monitoring stations established by OCDM will use the facilities of several Federal agencies, including the Department of Agriculture. This network is designed to map promptly the national fallout situation resulting from a nuclear attack. In addition, Agriculture must be concerned with the interpretation and application of fallout data in the assignments shown in paragraph 1. The following agencies of the Department are assigned responsibility for this function in the areas indicated:

(*a*) *Agricultural Research Service.*—The Agricultural Research Service is responsible for all administrative functions on behalf of the Secretary relating to radiological safety within the Department (9 AR 200n). In this connection the ARS will make the necessary general arrangements with the OCDM for the acquisition, use, and disposition of monitoring equipment. ARS will arrange with OCDM and by other means for the training of instructors in the use of monitoring equipment; give general assistance to agencies of the Department in providing for an orderly program for the training of monitors, including special emphasis on the agricultural needs to be met through this program; develop and formulate the guidelines for use in determining the most efficient rehabilitation of affected agricultural lands and commodities; and coordinate radiological training and research within the Department and with OCDM.

The ARS, in conformity with overall Departmental coordination, shall plan and place in a state of continued readiness for implementation a system for the radiological monitoring of agricultural commodities in meat slaughtering and processing plants subject to continuing ARS inspection. This assignment includes the postattack utilization of raiological information and determination in conformity with guidelines established by ARS, and in consultation with local civil defense authorities, as to the circumstances under which the commodities may be safely used.

(*b*) *Agricultural Marketing Service.*—The Agricultural Marketing Service, in conformity with overall departmental coordination, shall plan and place in a state of continued readiness for implementation, a system for the radiological monitoring of poultry processing plants subject to continued AMS inspection. The Agricultural Marketing Service will also develop a system for the radiological monitoring of agricultural commodities owned by CCC or USDA, except those stored on farms, ranches, or at bin sites. This assignment includes the postattack utilization of radiological information and the determination in conformity with general guidelines established by ARS and in consultation with local civil defense authorities as to the circumstances under which the commodities may be safely used. The Agricultural Marketing Service will begin in a minimum way to include monitoring in the training of selected employees concerned with food management and, in consultation with agencies which have a primary responsibility, will be prepared to assist further in monitoring.

(*c*) *Soil Conservation Service.*—The Soil Conservation Service, in conformity with overall departmental coordination shall plan and place in a state of continued readiness for implementation a nationwide system for the radiological monitoring of agricultural lands and waters, livestock, and of farm commodities stored or harvestable on farms, ranches, or at bin sites. (Note: The term "agricultural lands" as used here excludes forest and other adjacent or inter-

minged lands described in item (*d*) below.) This assignment includes the post-attack utilization of radiological information and determination in conformity with guidelines established by ARS, and in consultation with local civil defense authorities, as to the circumstances under which lands may be returned to production and the farm produce and commodities safely used.

(*d*) *Forest Service.*—The Forest Service, in conformity with overall departmental coordination shall plan and place in a state of continued readiness for implementation a system for the radiological monitoring of:

(1) All lands within national forest boundaries, including tracts of privately owned intermingled farmland.

(2) All State and privately owned forest and range land protected by the Forest Service under cooperative agreements, within and adjacent to the national forests.

The States will have responsibility for radiation monitoring on State and privately owned forest lands protected from fire by the State forestry organization, and such other monitoring as may be necessary to carry out their rural fire protection responsibilities. However, under its rural fire defense delegation, the Forest Service may furnish the State forestry organizations such limited advice and assistance in radiological planning and training as is practicable.

In planning and carrying out the foregoing specific responsibilities the agencies shall, with the overall coordination of ARS, utilize the assistance of other Department agencies and cooperating agencies where factors of location and capability make that practicable. For this purpose, other agencies are authorized in such circumstances to designate and make available for training such of their personnel as may be effectively made a part of the Department's radiological monitoring services.

4. *OCDM fixed monitoring stations*

The OCDM has requested the Department to man about 450 of the Federal fixed stations referred to in paragraph 3. This assistance will be provided by the SCS and FS and is in addition to the continuing assignments of responsibility for the more intensive radiological monitoring for agricultural purposes. In order to avoid duplication of effort, this assistance to OCDM should be an integral part of the monitoring for agricultural purposes at the locations common to both activities.

5. *OCDM liaison*

No assignments made by this memorandum modify in any way the responsibilities of the Director, Food and Materials Requirements Division, CSS, for Department liaison with OCDM.

TRUE D. MORSE, *Acting Secretary.*

## EXHIBIT 5

### FOOD STOCKPILES FOR CIVILIANS IN OFFSHORE AREAS OF THE UNITED STATES

(A report developed in the U.S. Department of Agriculture pursuant to the Agricultural Act of 1956, 84th Cong.)

#### SUMMARY

1. Inshipments of food into offshore areas by water supply approximately the following proportions of total food energy consumed by civilians:

| | *Percent* |
|---|---|
| Alaska | 92 |
| Hawaii | 70 |
| Puerto Rico | 62 |
| Virgin Islands of United States | 85 |
| Ryukyu Islands | 34 |
| Guam Island | 84 |

2. Normal food supplies would be inadequate in some offshore areas in the event of interruption of waterborne shipping for 60 days. The need for stockpiling of food for use in case of a national emergency, therefore, deserves careful consideration.

3. Tentative estimates of stockpiling needs in offshore areas are based on possible shortages, storability and cost of the individual items. It is estimated that the following amounts would assure the availability of nearly normal food energy in these offshore areas during a 60-day period without inshipments.

| Area | Rice | Other cereals | Lard | Beans | Dried fish | Total |
|---|---|---|---|---|---|---|
| | | *Long tons* | | | | |
| Hawaii | 5,500 | 4,700 | 0 | 400 | 0 | 10,600 |
| Puerto Rico | 14,500 | 6,000 | 2,000 | 2,000 | 2,000 | 26,500 |

4. While amounts needed in Alaska and the Virgin Islands cannot be estimated because of lack of adequate data on present stocks, but it appears that Alaska may need at least 8,000 tons and the Virgin Islands about 300 tons of food in stockpiles.

5. Government ownership of stockpiled foods would provide the greatest assurance of their availability when needed. If any food stockpiles are established, all costs probably should be shared by Federal and local governments and charged to civil defense.

6. Considerable planning will be required to determine minimum needs and make detailed operating plans for food stockpiles in these offshore areas. A major question involved in considering any possible stockpiling, is how strictly such should be held to a mere survival basis.

## INTRODUCTION

Food stockpiles for civilians in the United States have been under consideration for several years. Legislation has been proposed in the U.S. Congress to establish stockpiles of food as a guarantee against serious food shortages in deficit areas in event of a nuclear attack on this Nation. This Department has reviewed the food situation at intervals and has advised the Congress that supplies of domestically produced foods in the U.S. are adequate on a national basis for use during a postattack period. It is recognized, however, that possible interruptions of surface transportation could cause serious temporary shortages of domestic and imported foods in the distress areas of continental U.S., as well as temporary shortages of overall supplies in the offshore areas which are dependent on long distance ocean movements of foods. The present study is concerned exclusively with stockpile questions as they pertain to these offshore areas of the United States, including Alaska, Hawaii, Puerto Rico, the Virgin Islands, and others.

Stockpiles of food for emergency use have been recommended by the Governors of Alaska, Hawaii, Puerto Rico, Guam and the High Commissioner of the Ryukyu Islands. The Commissioner for the Virgin Islands considers stockpiling to be impracticable there. The Governors and the High Commissioners of American Samoa, Wake Island, Bonin-Volcano Islands, Saipan and the Trust Territory of the Pacific Islands have stated that food stockpiles are not needed in their areas.

Information in support of their positions generally has been provided by each of these Governors and by the High Commissioners. These recommendations and information have been studied by the Department of Defense and the Department of the Interior, as well as by this Department, and it has been concluded that stockpiling of some foods for civilians may be justified in Alaska, Hawaii, Puerto Rico, the Virgin Islands, and the Ryukyu Islands. This is tentative, however, since it is based on the arbitrary assumption of a 60-day period without inshipments and since further study of management problems is needed.

It is the purpose of this report to present pertinent data and information about the need and feasibility of food stockpiles for use in an emergency period during which ocean transportation would be curtailed or interrupted. Some information is also presented in regard to possible procedures and problems as well as kinds, amounts and costs of foods to be considered, if it is decided that food stockpiles should be established in one or more of these overseas areas.

## ASSUMPTIONS

A food stockpile is assumed to be a supply of food held in storage to supplement normal supplies, as needed, in an emergency. The analysis of stockpile needs in offshore areas of the United States is based on the assumption that

ocean transportation will be interrupted for a period of 60 days.[1] The amounts of foods required in such an emergency are based on requirements of the present population. Available supplies are based on the assumption that emergency measures would be established to assure maximum feasible use of local production and stocks of foods. This includes some assumed increases in local production, as well as total use of wholesale stocks, in a 60-day emergency. Possible losses of population and food stocks as a result of an attack are not evaluated, because of the wide variety of possible emergency conditions that would need to be considered. A direct attack on any offshore area could increase or decrease the severity of food problems, as described in this paper.

Food supplies in a recent year are compared with foreseeable requirements in an emergency period on a per capita basis assuming that waterborne shipments to each of the offshore areas would be discontinued for 60 days. In an emergency, it might be possible for offshore areas to get increased shipments of food from foreign areas, such as New Zealand, Australia, Canada, Latin America and other foreign areas. This possibility, however, has not been evaluated. Comparisons between supplies and emergency requirements are based on caloric values of foods and food groups under the assumption that food energy is the best single measure of the adequacy of emergency food supplies. It is assumed for this analysis that each of the six major groups must be supplied at a rate equal to at least 80 percent of the normal level, but that individual foods are generally not essential. Consumption and available supplies are measured on the basis of local production, inshipments, outshipments and wholesale stocks. There are some important limitations in these data. Production data, for example, generally do not include amounts consumed on farms where they are produced. Data are limited to supplies for civilians insofar as feasible, but commercial shipments of military supplies are included in shipments to Alaska and Hawaii and data are incomplete as to kinds of foods shipped. Also, some local production normally is procured for military use.

### ALASKA

*Food production and shipments.*—Alaska has a population of about 212,000 of which about 175,000 are civilians. About 30,000 of these civilians, however, are in families of military personnel who are supplied with food primarily from military bases. This leaves about 145,000 who are assumed to be dependent on commercial food supplies in Alaska. Most of the people live in or near trade centers and military installations.

Alaska has a large area of land which is sparsely settled and which is generally unsuited to food production. Excluding fish shipped out, the food produced in Alaska supplies only about 8 percent of the food energy in all foods consumed by the civilian population. Alaska harvests about 1,400 acres of potatoes and vegetables and 14,000 acres of other crops each year, the latter being primarily hay and grain for livestock feed. This indicates only about 0.1 acre of all crops per capita of the civilian population. Milk is the principal livestock product, although the local production amounts to only about 4 ounces per capita per day. Large amounts of fish are caught, both for outshipment and for local use, but the amount consumed can be only approximated. Wild animals also are used for food by rural residents, but the amounts have not been estimated.

Inshipments of food supply about 92 percent of all food consumed by civilians in Alaska, as measured by calorie value (table I). Nearly all of these inshipments arrive by water from the States of the United States. They include all kinds of foods which total about 7,200 long tons per month or 87,000 long tons per year. Outshipments of fish and fish products are about 210,000 tons per year.

*Possible food shortages in an emergency.*—An interruption of waterborne shipping for 60 days would cause extreme shortages of nearly all types of foods in Alaska, unless some advance action were taken to provide additional supplies. This might be done either by providing emergency transportation or by providing food stocks that would be available for use during an emergency.

During an emergency, it might be possible to deliver significant amounts of foods to Alaska by use of land routes, or by a combination of land, sea, and air. Data are not available to indicate amounts of food that normally move to Alaska by land routes, but only a small volume has been passing through customs at

[1] This period is used for illustrative purposes only.

Tok Junction. The Alaska Highway has many bridges and deep cuts that would be vulnerable to enemy action, but these might be circumvented with difficulty by the use of ferries, if arrangements were made in advance. Also, there is a route for a railroad right-of-way whose feasibility is now being studied by an international commission. Since transportation of food to Alaska cannot be assured during an emergency, consideration must be given to the provision of additional stocks for use during a possible emergency. The Territorial Governor of Alaska stated in 1958, "I am of the opinion that food stockpiling in Alaska seems to be the only means of insuring against dangerous shortages or perhaps starvation, if the target areas in Anchorage, Fairbanks, and Juneau were destroyed or substantially damaged by nuclear weapons and a percentage of the people were successfully dispersed. I am assuming that, if this were to happen, shipping from the United States would be interrupted."

Wholesale food stocks are estimated roughly by Alaskan officials to be sufficient to meet the civilian needs for about 12 days in the major cities and 2 to 3 weeks in smaller trade centers. Retail stocks are estimated to be enough for about 3 days' needs. Data are not available in regard to the volume of stocks of specific commodities. About 40 percent of the food and 46 percent of the people are in the target areas of Juneau and Anchorage. Fairbanks also, is a highly vulnerable area and has about 25 percent of the total population in Alaska, but its food supplies have not been estimated.

Commercial supplies of meat and meat substitutes are derived about 92 percent from inshipments. This group includes meats, poultry, eggs, fish, dry beans, and nuts. Data on inshipments and production for civilians indicate use of about 210 pounds of this group of foods per capita, compared to about 250 pounds per capita in the other States. Consumption in Alaska, however, is believed to be considerably higher than these data indicate. Numbers of farm animals are insufficient to supply meat for Alaska more than a week or two during an emergency, even though most of the breeding stocks were to be slaughtered. Large amounts of fish and wild game are utilized without passing through commercial markets. It is estimated that fish consumption by civilians in Alaska averages 20 pounds per capita per year. In an emergency when fishing is possible, the people might be able to consume increased amounts of fish, so as to offset the loss of inshipments of meat. Enemy actions, however, might endanger fishing operations and other essential movements. Shortages of fish occur in most parts of Alaska during the months of December through April, but supplies are more than adequate during other months. Stocks of canned fish are moved out quickly after the end of the canning season. Data on actual stocks of meats and fish are not available, but the local civilian supplies would be used quickly in the absence of inshipments, except in the months of June through October. Much preparation and planning would be necessary to provide fishery products to alleviate shortages of red meat during the months of November through May. In the absence of such an arrangement, it appears that provisions should be made to increase the stocks of fish, dry beans, and possibly meats, for use during an emergency.

Alaska produces about half of the indicated supplies of milk products, excluding butter. Available data for Alaska indicate a total civilian supply of less than half the U.S. rate per capita. Inshipments are about equally divided between evaporated milk, dry milk, and miscellaneous dairy products. The annual inshipments of these items amount to about 5,000 long tons, but stockpile needs cannot be estimated in the absence of data on the volume of normal stocks of these items.

Fats and oils information is incomplete for Alaska. Reported shipments to Alaska are enough for about 10 pounds per person per year, but it is believed that consumption in Alaska is about equal to the average U.S. rate of 45 pounds per capita. Local production for human consumption is negligible and stocks are not reported. Oil in salmon waste is discarded, as its utilization is not economically feasible. It appears probable that some fats and oils should be included in any food stockpile in Alaska.

Cereals, grains, and various canned and packaged items, which are shipped from other States, supply nearly half of the caloric value of all foods consumed in Alaska. This includes a large amount of unidentified canned and packaged groceries whose caloric value is estimated at 500 calories per pound. Wheat flour provides nearly 20 percent of the total food energy. Stocks of these items may be substantial, but amounts have not been reported. No definite conclusion can be reached, therefore, but it appears that they would be important in a food stockpile in Alaska, if one is established.

Alaska produces a substantial volume of potatoes, but about 64 percent of the requirements of all vegetables and fruits is shipped from other states. Good supplies of locally grown vegetables and bush fruits are available in the Fairbanks and Anchorage areas only from late summer to early winter, and small amounts of locally grown vegetables are available in some other areas. Monthly inshipments of fruits and vegetables total about 1,300 tons of fresh and frozen items and probably an equal, or larger, amount of canned and dried items. It appears that some preserved fruits and vegetables would be needed in any stockpile in Alaska. Minimum supplies would be important in an emergency to provide ascorbic acid and other dietary factors and for morale benefits.

Sugar is not produced in Alaska. Inshipments amount to about 300 tons per month, about equal to the rate of consumption in the other states. There are no locally produced substitutes for sugar in Alaska that could be used to offset a shortage of sugar, so that stocks would be the only source of supply in a 60-day period without inshipments. The amounts needed in a stockpile would depend on amounts normally held in Alaska.

Coffee, tea, cocoa and spices, also, are obtained entirely from outside sources. These items would be important for maintenance of morale in an emergency. Amounts needed in a stockpile, again, will depend on amounts normally held.

In 1955, Alaska produced about 15 percent of the grain feed used for the relatively small numbers of livestock, but the quality of locally grown feed is high and production is increasing rapidly. Monthly inshipments were about 400 tons in 1955. Feed concentrates in commerial stocks are enough for a minimum of 30 days. Some additional supplies are on farms, but it appears that additional stocks of feeds may be needed in a stockpile.

### HAWAII

*Food production and shipments.*—The daily consumption of commercially marketed food in the Territory of Hawaii is about 3.4 pounds per capita, or about 26,400 long tons per month for the 566,000 civilians in 1958. Hawaii produces more than half of the tonnage of its commercial food supply, but the locally produced foods provide only about 30 percent of the food energy consumed by the civilian population. Data for local production are incomplete, however, since they include only the "marketings". About 97 percent of the inshipments of food are from the U.S. mainland and they are primarily flour and rice. These two items supply about 37 percent of the total energy value in all foods consumed in Hawaii (Table II). These cereal foods, therefore are essential to the subsistance of the people. Other inshipments include meat, poultry, fish, dairy products, fats, oils, fruits and vegetables. Also, practically the entire supply of feed grains is obtained from offshore sources.

An analysis of land use in Hawaii helps to explain the large extent of dependence of the people on food inshipments. In 1954, about 8 percent of the land area of the islands was used for cultivated crops and 86 percent of this crop land was devoted to the production of sugar and pineapples. This left only about 48,000 acres of crop land to provide other foods for 503,000 people, or about 0.1 acre per capita in 1955. This is in contrast to more than two acres of crops per capita on the mainland of the United States. Substantial amounts of foods are shipped out of Hawaii, mostly sugar and pineapples. In an emergency, larger amounts of sugar and pineapples would be available for local use, and their consumption would be limited only by the tastes of the people. Other food items that are normally exported are primarily fish, fresh fruits and coffee. The usual outshipments of these latter items probably would be utilized in Hawaii, if ocean shipping were interrupted in an emergency.

*Possible food shortage in an emergency.*—The Governor of Hawaii has stated that, "The stockpiling of food in this Territory * * * is deemed extremely important to the safety of our people * * *." He suggests the stockpiling of 9,000 tons of foods, including most of the items that are normally obtained from outside sources. He estimates that this food would have an inventory value of about $350 per ton, or a total value of $3,150,000.

It is estimated that wholesale stocks of imported foods in Hawaii are sufficient to meet requirements for a period of two to three weeks without inshipments. More than 90 percent of these stocks are in or near Honolulu, where more than half of the people live. An enemy attack on Honolulu could destroy a large proportion of these stocks, but it might also kill a large number of people. For the purposes of this report, it is assumed that any attack on Hawaii would destroy equal proportions of the population and the food supply.

The Territorial Governor indicated that the idea of creating a stockpile in Hawaii has been under discussion since 1936, when Hawaii had a major shipping strike. Periodically, it has received the attention of many people. Hawaii is vulnerable to "acts of nature", such as tidal waves, volcanic activity and meteorological conditions of wind and excessive rain. The four largest importers of food operate with only 14 to 21 days of supply of most items and only enough rice for 10 days. The statement submitted by the Governor states, however, that "If our outlying islands escape enemy action, then their food supplies, implemented with local production, can carry them for at least 60 days. Long before that, provisions of a staple nature would be exhausted, but substitutions would be possible and the civilian population on outlying islands is far less vulnerable than that living on Oahu. It, therefore, seems logical to suppose that the major logistical problem, during the first 60 days of an emergency, will be confined primarily to the 302,497 people residing in the city of Honolulu. Sufficient food is an important insurance and necessity".

The report from Hawaii states that the people outside of Honolulu could subsist for 60 days without inshipments and it suggests that a stockpile should be established only for Honolulu. It is recognized that rural people are less dependent on imported foods than are urban residents. The following analysis of possible food shortages, however, is based on the supplies and requirements of the entire population of 566,000 civilians in the Hawaiian Islands, because separate data are not available regarding food requirements of the 302,000 people who live in Honolulu.

Inshipments of meats and other foods in the meat group provide about 46.7 percent of the total energy value of this group (Table II). Normal wholesale stocks and exports, presumably, could be made available for local consumption during an emergency, but this would not offset the loss of waterborne inshipments for 60 days. Even with substantial increases in local production of meats and nuts, there would be a shortage. A stockpile of 400 long tons of dry beans probably would raise the local supply of the meat group to about 90 percent of normal, based on energy value, although the shortage of red meats would be about 25 percent. These estimates are based on the assumption that the slaughter of meat animals would be increased 25 percent and the consumption of locally produced and marketed nuts would be doubled. This increased meat production would require a reduction of less than 5 percent in number of beef cattle and hogs on farms. Production of other local items is assumed to be at normal levels in an emergency. On this basis, it appears that the stockpile of items in the meat group could be limited to about 400 long tons of dry beans.

Fresh milk from local dairies provides about 43 percent of the total supply of milk and milk products consumed in Hawaii. The loss of inshipments of canned milk, dry milk, and cheese could be offset by depletion of the normal stocks, during an emergency. There would be a shortage of other dairy products if inshipments were discontinued, but available information does not indicate the principal kinds of products in this group. It is believed that temporary scarcity of these would not cause serious hardship, so that no additional stocks of any milk products seem to be necessary.

No local production of fats and oils is reported, although it may be assumed that local products include small amounts of butter, lard, beef fat, and coconut oil. The consumption per capita, however, probably is about equal to the rate on the U.S. mainland, although data on inshipments indicate a rate equal to only a third of the mainland rate. Normal stocks of fats and oils in Hawaii are sufficient to equal the indicated inshipments, except for butter and margarine, for a period of about 6 months. This would be a 2-month supply at the U.S. rate of consumption. Additional stocks of fats and oils, therefore, would not be needed during a 60-day interruption of ocean shipping.

Wheat and other cereals are not produced in Hawaii, except for a small amount of rice. Yet cereal products supply about 41 percent of the energy value of all foods consumed in Hawaii. Also, there is no commercial flour mill in Hawaii. Cereal products, therefore, would be most essential in a food stockpile. It is fortunate that these important items are generally storable, although some special packaging might be desirable. The needed amount of additional stocks are calculated so as to provide only slightly less than the normal total daily caloric intake during a 60-day period without inshipments. This would require increases in stocks totaling about 5,500 long tons of rice, 1,500 long tons of flour, and 3,200 long tons of other processed cereals and miscellaneous packaged foods. An alternative would be to stockpile grain and to provide

emergency milling facilities, or perhaps to prepare less refined cereal foods in feed plants during an emergency.

Inshipments of fruits and vegetables for consumption in Hawaii constitute nearly 70 percent of the consumption of this food group. These inshipments include white potatoes, canned vegetables, and various fruit products. They supply about 9 percent of the total energy value of all food shipments into Hawaii, although they constitute 34 percent of the tonnage of inshipments. These fruit and vegetable imports, therefore, require a relatively large amount of shipping space in relation to their energy value and some of them require refrigerated storage or special processing and packaging for conditions of storage in Hawaii. It is estimated that normal stocks and possible accelerated production would provide about 67 percent of the fruit and vegetable needs of the civilian population during the first 60 days after an attack, even though there were no inshipments during the period. In such a situation, it is assumed that the people of Hawaii would consume more rice, beans, and local fruits, especially pineapples. Consumption of locally grown root crops probably would be increased. It is concluded, therefore, that no fruits or vegetables, either canned or otherwise, should be recommended for a food stockpile in Hawaii.

Sugar and sweets would not be included in any stockpile of foods in Hawaii. Nearly all of the sweets, other than sugar, are shipped into the island from the mainland, but their unavailability probably would not create any serious problem during an emergency. It is assumed that consumption of sugar and sweets produced locally would increase under emergency conditions to offset any shortages of imported candy, preserves, and other sweets.

Supplies of coffee apparently depend largely on inshipments of roasted coffee, although outshipments of green coffee far exceed the inshipments of processed coffee. Arrangements could be made for necessary processing of locally produced coffee for local consumption during an emergency. Tea, cocoa, and spices probably should be considered for inclusion in any stockpile.

Annual inshipments of about 90,000 long tons of feed concentrates into Hawaii constitute a very large proportion of the total commercial supplies. Data are not available in regard to feeds grown and fed on farms where they are produced. Concentrate feeds are utilized primarily for cattle, poultry and hogs, but the cattle and hogs receive less than a pound of concentrates per animal unit per day. This indicates that these animals depend largely on pasture and other noncommercial feeds. Commercial stocks of feed for farm animals amount to about 5,000 tons, or about enough for only 15–20 days' needs. This supply would be enough to feed the dairy cows and poultry exclusively for about 6 or 7 weeks. The location of these stocks of feed is not known, but it is presumed that a substantial proportion is in Honolulu and might be destroyed by an attack. Farm stocks of feed, no doubt, are generally sufficient for several days and would extend the period of feeding in the absence of inshipments. The report from Hawaii estimates that, in an emergency, 3,000 tons of commercial feeds per month would be sufficient if there were increases in the use of molasses and other noncommercial feeds. It seems likely, therefore, that the animals would suffer no serious losses, if normal stocks of 5,000 tons were to constitute the only supplies of commercial feeds available during a period as long as 60 days. The shortages might be alleviated to some extent by the accelerated slaughter of beef cattle and hogs to offset the decline in inshipments of meat and poultry from the other States. It is concluded, therefore, that stockpiling of feed for livestock in Hawaii probably is not necessary.

The stockpile estimates have been determined with the assumption of increased production and processing of food in Hawaii during an emergency. It is believed that these amounts would provide approximately normal food energy for Hawaii during the first 60 days of an emergency. However, the assumed increases in local supplies may not be available unless there are advance actions to promote increased emergency production. The Governor's report states that Hawaii has "complete plans whereby a considerable degree of self-sufficiency could be attained," but a period of 4 months would be required to obtain a substantial increase in food production. This program is dependent on planting 22,000 acres of food crops and it would require not less than 12 months to achieve maximum production. With normal local production and processing and with the calculated stockpiles, there would still be a deficiency of about 5 percent in over-all supply of food energy. This is based on the assumption that the stockpile would include 5,500 tons of rice, 4,700 tons of other cereals and 400 tons of dry beans, and that there would be no inshipments for 60 days.

PUERTO RICO

*Food production and shipments.*—Puerto Rico has a population of more than 2¼ million on an area of 3,500 square miles, mostly mountainous. Puerto Rico obtains about 62 percent of its food supply (food energy) from waterborne inshipments. More than 90 percent of these inshipments of foods is obtained from the U.S. mainland. Outshipments from Puerto Rico are mostly sugar, of which the annual production is equal to nearly 1,000 pounds per capita of the population. Other foods shipped out of Puerto Rico are relatively unimportant.

Food production for consumption on the island is restricted by the strong emphasis on sugar as an export crop. Sugarcane utilizes about half of the cropland, including about 80 percent of the land used for crops on the highly productive coastal plains. Coffee utilizes about one-fifth of the cropland, while tobacco and cotton occupy about 4 percent.[2] Crops for local consumption, therefore, are grown only on the remaining fourth of the cropland, about 190,000 acres, or 0.08 acre per capita. Double cropping is used where feasible, but land used for the food crops, other than sugar, is mostly of inferior quality because of steep slopes, shallowness, lack of water and other factors.

A recent study indicates that Puerto Rico can increase substantially its production of food without loss in production of sugar.[3] This would reduce the need for food stockpiles, but could not be done immediately. Sugar and milk are the major foods produced for local consumption, insofar as caloric value is concerned. These items supply about 615 calories per capita daily, or about 25 percent of the food energy in all foods consumed in Puerto Rico. Other foods produced locally are primarily meats, chick peas, nuts, fruits, and root crops. Locally produced coffee is equal to about 75 percent of the requirements.

The foods obtained from outside sources are primarily rice, wheat flour, dry beans and cooking fats. Inshipments of these four items supplied about 76 percent of the total food energy in all inshipments of food in 1956–57, and 45 percent of the total food supply in that year (table III). Other inshipments included meats, milk products and many items of minor importance.

Locally produced foods that are normally exported, presumably, would be retained for local consumption in event of an interruption of receipts by water. This would not be a major factor in Puerto Rico because these outshipments, other than sugar, are relatively unimportant and would supply less than 2 percent of the food energy needs of the local population. These outshipments are mostly coconuts, fruits and vegetables.

*Possible food shortages in an emergency.*—The Chairman of the Puerto Rico Planning Board, has stated that, "in the opinion of all the government officials who have been contacted, an obvious need exists for emergency (food) stockpiles."

Interruptions in ocean shipping have caused food shortages in Puerto Rico on several occasions. During World War II, Puerto Rico suffered greatly as a result of acute shortages arising from the difficulties of continuing inshipments. The submarine blockade and the lack of shipping virtually isolated Puerto Rico from the mainland. The shortages of feed, fertilizer, equipment, and other essentials sharply reduced agricultural production. The curtailment of shipping made it essential that more food be derived from local sources.[4] Most rural people, however, could be largely self-sufficient for a 60-day emergency.

Normal wholesale stocks of most foods are sufficient to meet requirements for only about 3 weeks, according to data supplied by the Puerto Rico Planning Board.[5] This refers to foods obtained from outside sources and, presumably, does not include retail stocks which the Puerto Rico Planning Board states are enough for about 15 days. For purposes of analysis, it is assumed that the wholesale and retail stocks could be drawn down in an emergency, to a level equal to normal volume of retail stocks alone.

The normal consumption of the meat and meat substitutes in Puerto Rico supplies about 400 calories of food energy per person per day, of which about 72 percent is derived from inshipments (table III). It might be possible in an emergency to increase the marketing and consumption of local meats and nuts,

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[2] Data on use of land are from the 1950 Census.

[3] "A Comprehensive Agricultural Program for Puerto Rico," U.S. Department of Agriculture, 1953.

[4] "A Comprehensive Agricultural Program for Puerto Rico," U.S. Department of Agriculture, 1953.

[5] The Board states that 'normal food stocks of most items in Puerto Rico appear to be adequate to meet consumption needs for about 50 days." This, however, is not borne out by data submitted by the Board.

but this cannot be assumed. The normal production and stocks of the meat group would provide a total of only about 330 calories of meats and related products per person per day during a 60-day interruption of inshipments. This is about 70 percent of the average consumption. It appears, therefore, that additional stocks of dry beans and dried fish would be desirable. This would require about 2,000 long tons of dried fish and 2,000 long tons of dry beans and would leave a deficiency of less than 10 percent in the caloric value of the meat group during a 60-day interruption of transportation.

Total current consumption of milk products, excluding butter, is slightly more than a pint per person per day (milk equivalent). The major part of the total supply is derived from local production of fresh milk, although evaporated milk, cheese and dry skim milk are imported in substantial quantities. The reported normal stocks of the imported items are sufficient to meet the needs for more than 60 days, so that additional stocks of milk products are not needed under the assumptions used here.

Fats and oils, mostly lard, are consumed at the annual rate of about 40 pounds per capita which is only slightly less than the rate in continental United States. Nearly all of this supply is derived from inshipments and wholesale stocks are enough for about 27 days at the normal rate of consumption. Some additional stocks would be needed, therefore, for a 60-day period without inshipments. If the minimum rate of consumption were to be 80 percent of the normal rate, a stockpile would be needed to provide about 100 calories per person per day and would require about 2,000 long tons of stabilized fats for a period of 60 days. For prolonged storage, without refrigeration, most edible fats should be in sealed metal containers.

Cereals and grains supply about a third of the total food energy of all foods consumed in Puerto Rico. Most of this is rice, although flour and other cereals are imported in substantial amounts. Nearly all of the supply of cereals is obtained from overseas sources, and the normal wholesalers' stock are enough to meet the needs for only 15 to 20 days. Locally grown grains are not included as food, although some locally grown corn is used as food. The amounts are not known. Amounts of bakers' stocks of flour are not known, but they, presumably, are in addition to these wholesalers' supplies. These data indicate that the consumption during a 60-day interruption of transportation could be held close to normal by having additional stocks of 14,500 long tons of rice and 6,000 tons of other cereals.

Fruits and vegetables supply about 10 percent of the energy in all foods consumed in Puerto Rico. Inshipments provide about a third of the total supply of fruits and vegetables, but normal stocks of a few canned items are sufficient to offset the loss of inshipments of all fruits and vegetables as a group, for 60 days. Also, some increases in use of local products probably could be accomplished in rural areas during an emergency. Therefore, it appears unnecessary to stockpile any fruits and vegetables.

Sugar is shipped out of Puerto Rico in large quantities, so that normal stocks are more than adequate to meet emergency requirements. Some other sweets would be in short supply during an emergency, but this would not cause serious hardship. It seems likely that some increase in consumption of sugar and molasses from local sources could be accomplished during an emergency in order to offset shortages of other foods. It is assumed, therefore, that sugar consumption could be increased about 15 percent throughout a period of 60 days without inshipments of food.

Coffee is produced locally, but tea, cocoa and spices are obtained largely from outside sources. It may be that local facilities would need to increase their rate of processing of local coffee during an emergency to offset inshipments of processed coffee which normally constitute about 20 percent of the supply. Stocks of green coffee, no doubt, would be adequate, but tea, cocoa and spices probably should be included in any stockpile.

About 91 percent of the grains and mixed feeds for animal feeding are obtained from outside sources. The normal stocks held by wholesalers are enough to meet the minimum needs for only about 3 weeks. Additional stocks might be needed in a 60-day emergency. Efforts to utilize additional amounts of local materials for animal feed have not met with much success in recent periods when drought conditions have caused feed shortages. A new facility, however, is being installed which will process feed, flour, and corn meal and which will have a substantial capacity for storing grain. The operation of this facility may obviate the necessity of a feed stockpile, although it is located in a target area.

The present population of Puerto Rico would have about 93 percent of its normal food energy supply during a 60-day emergency with normal production and without inshipments if there were the following additional stocks: Dried fish 2,000 tons, dry beans 2,000 tons, lard 2,000 tons, rice 14,500 tons and other cereals 6,000 tons, or a total of 26,500 long tons. These additional stocks might be inadequate after an attack, since about 33 percent of the present food stocks and only 20 percent of the people are in target areas. It seems likely, however, that an attack would reduce the food stocks proportionately less than it would reduce population. Also, the production of food probably would be reduced less than population.

### The Virgin Islands of the United States

The United States Virgin Islands consist of a number of islands forming a portion of the boundary between the Atlantic Ocean and the Caribbean Sea. They have a population of about 30,500 people. The census of 1954 reported 750 farms, mostly on the island of St. Croix, but the number has decreased by conversion of land to other uses. In 1954, these farms contained about 6,300 acres from which crops were harvested, including 5,300 acres of sugar cane. Crops for local consumption were harvested in that year from about 1,000 acres or about 0.3 acre per capita.

Available data indicate that commercially marketed foods produced on farms in the Virgin Islands supplied about 15 percent of the food energy in all foods consumed on the islands in 1955. There is some unreported home garden production. The report submitted by the Governor indicates, however, that probably 90 percent of the commercial food supply currently is shipped into the islands by water, so that any interruption of waterborne transportation would cause serious shortages as soon as reserve stocks were depleted. Data are not available, however, in regard to the amounts of foods normally in stocks of dealers in the Virgin Islands. Shortages during an emergency would be greatly affected by the number of tourists who happened to be there.

About half of the foods in the meat group are derived from local production, although this includes meat from slaughter of a substantial number of cattle that are shipped in from nearby British islands. Locally produced foods in the meat group are mostly meat, fish and eggs, with some fresh beans, lentils and coconuts. During an emergency period, inshipments of animals for slaughter might be interrupted, so that meat supplies would decrease, but harvest of coconuts might increase. The local supplies of the meat group in an emergency, therefore, probably would be about half of normal. This indicates that a stockpile of some items in this group is needed.

Only about a third of the fresh milk used in the Virgin Islands is derived from local production, and production varies seasonally from about 50 percent to 20 percent of the needs. Manufactured milk products are obtained entirely from outside sources. Minimum amounts of some manufactured milk items are highly essential, especially evaporated milk, but it is possible that normal stocks would be enough to meet minimum needs in a 60-day emergency.

Inshipments provide the entire commercial supply of all fats and oils consumed in the Virgin Islands. Stocks data are not available, but it is believed that normal supplies would be inadequate to assure a minimum supply on the islands, if waterborne shipments were discontinued for 60 days.

Cereals and grains are not produced for food on the Virgin Islands. A small amount of corn is produced, but it is used for livestock feed. Inshipments of cereals are vital, since they are estimated to provide about 25 percent of the energy in all foods consumed on the islands. A substantial amount of imported flour is normally shipped out, perhaps to other islands. This flour is presumed not to be available for local use in an emergency. A stockpile of cereal foods, therefore, appears desirable for an emergency, but the amount depends upon the volume of normal stocks, for which data are not now available.

Commercially marketed fruits and vegetables supply less than 10 percent of the energy value of all foods consumed in the Virgin Islands. About 75 percent of these are obtained from outside sources, mostly in the form of canned products. The loss of these inshipments for a period of 60 days probably would not cause serious hardship.

Sugar is grown in the Virgin Islands, but the raw sugar is shipped out for processing. Interruption of inshipments of refined sugar, therefore, would cause a shortage of an essential part of the local food supply. This indicates a need for the maintenance of substantial stocks of refined sugar for emergency use, unless facilities for refining sugar are installed in the Virgin Islands.

The statement submitted by the Governor of the Virgin Islands recommends that essential foods be stockpiled on each of the three islands, St. Thomas, St. Croix and St. John, since they are separated by about 40 miles of open sea. Fear of inflationary prices in an emergency was the basis for his suggestion that stockpiled foods should be owned by the Federal Government.

The available information indicates, therefore, that there would be major problems in stockpiling foods in the Virgin Islands. Nevertheless, there seems to be justification for a stockpile of some foods. Such a stockpile probably should include evaporated milk, lard, rice, flour, sugar, and coffee, as a mininum. A definite conclusion in regard to the size of stockpile and the foods to be included depends on the extent of normal stocks and the problems which develop as detailed plans are made for stockpile management.

### GUAM ISLAND

Guam Island has a civilian population of about 38,600, excluding families of members of the Armed Forces. Prior to World War II, Guam produced a large proportion of its food supply, especially fruits and vegetables. Military operations on the island since 1942 have greatly reduced the arable land available for agriculture. The Census of Agriculture indicates that crop production declined 86 percent between 1939 and 1949. In 1957, the production of fruits, vegetables and corn had increased to about 16 percent of the 1939 level, whereas, the production of coconuts was only about 8 percent of the 1939 level.

The current production of foods on Guam, therefore, is largely poultry products, coconuts, fruits and vegetables. All of these provide only about 16 percent of the energy value of all foods consumed by civilians on the island. Rice supplies about 37 percent of the calorie value of all foods used, but very little rice is produced locally. Other important inshipments of foods include meats, milk products, fats and oils, flour, sugar and coffee. Normal commercial stocks of these items are sufficient to meet the needs for about 44 to 63 days, depending on the items. It appears that increased dependence on local production in an emergency could supplement normal food stocks, so that no serious hardship would result during a 60-day period without waterborne shipments.

The Governor of Guam recommends the stockpiling of most of the items not produced in substantial quantities on the inland. He recommends that items for a stockpile be sealed in cans, including meats, evaporated milk, fats, sugar, cereals, and coffee.

Food supplies maintained on Guam by the Navy would be available to supplement the civilian supplies to some extent in an emergency. A stockpile of food for civilians, therefore, is not recommended. Some added stocks might be desirable, however, if it is to be assumed that more than 60 days would elapse without inshipments.

### RYUKYU ISLANDS

The Department of the Army has administrative responsibility for Ryukyu Islands, which include Okinawa, and where about 45,000 people are employed in support of the military base. These islands have a population of about 816,800. Rice is the principal food item that is obtained from outside sources and this item normally arrives from offshore sources during the period of January through April each year. The lowest point in level of rice stocks, therefore, is about December 31, when the storage facilities are filled to only about 17 percent of capacity. The High Commissioner who represents the Department of Defense estimates that rice consumption amounts to about 3,400 tons per month and he recommends that consideration be given to providing a stockpile of 8,000 tons of rice. He states that "serious rice shortages are occasioned by droughts, typhoons, and inability to arrange timely government-to-government negotiations," and that these problems have led to the necessity of rationing "during the present fiscal year."

The total capacity of facilities for storage of rice is estimated at 35,050 long tons, so that the minimum stocks of rice (17%) in December are about 6,000 tons. The monthly utilization of 3,400 tons indicates that these minimum supplies are enough to meet the needs of the people for nearly two months. The Ryukyu produce only limited amounts of rice, sugar and meats, but they produce most of their requirements of sweet potatoes, pulses, other vegetables and fruits. Data furnished by the High Commissioner indicate that the locally produced foods constitute about 61 percent of the diet of the people, while

inshipments of rice supply about 21 percent of the diet.* Stocks and seasonal production of local products have not been reported, but it is assumed that substantial amounts are available at all times of the year. This is especially true of sweet potatoes, which could be harvested at an accelerated rate in a period of rice shortage. Sweet potatoes supply about 37 percent of the calories of all foods consumed, as reported by the High Commissioner.

Information submitted by the High Commissioner does not include data in regard to normal stocks of food, except rice, so that it is not possible to present a satisfactory appraisal of the need for additional stocks of other food in the Ryukyus. It has not been demonstrated clearly that any large additional amount of rice should be stockpiled, since the minimum stocks of rice normally are sufficient for about 53 days on December 31, which is at the beginning of the season of heavy inshipments. Additional stocks of about 500 tons of rice would assure a 60-day supply at all times. The possible shortage of rice and some other foods in a 60-day period without the additional stocks and without inshipments probably could be offset, insofar as energy values are concerned, by increased consumption of sweetpotatoes and other locally produced foods.

### OTHER TERRITORIES AND POSSESSIONS

Stockpiles of foods are not recommended for other offshore Territories and possessions. This includes those under the administrative management of the Department of Defense, namely, Wake Island, the Saipan district of the Trust Territory of the Pacific Islands and the Bonin-Volcano Islands. It includes also the Territory of American Samoa.

Food storage facilities on Wake Island have a capacity for storage of 3-months' supply of foods for the 950 persons who live there, all of whom are supplied by and employed by contractors, commercial airlines, and the Civil Aeronautics Administration. There is no native population. Replenishment of stocks is done monthly, so that the minimum stocks are sufficient for 60 days. Additional warehouses are being planned for installation by the Civil Aeronautics Administration. In view of these facts, it is not considered necessary to stockpile additional food supplies on Wake Island.

Saipan has a civilian population of about 6,600. Rice is the principal food, and is nearly all obtained from outside sources. Rice is the source of about 50 percent of the food energy in all foods consumed on the island. Locally produced foods constitute only about 12 percent of all civilian foods, as measured by caloric value. The Bonin-Volcano Islands also depend largely on inshipments of food. Normal stocks of rice and other foods have not been reported in detail, either for Saipan or for the Bonin-Volcano Islands. Navy activities on these islands depend primarily on the Naval Supply Depot on Guam, which is nearby.

The Department of the Navy states that "stockpiling of food on either Saipan or the Bonins is not recommended." This conclusion is based on the assumption that civilian food needs on these islands could be met in an emergency by shipments from the Naval Supply Depot on Guam.

The Trust Territory of the Pacific Islands is administered by the United States under the trusteeship system of the United Nations. It includes about 2,000 islands and islets scattered over an area of 3 million square miles in the Central Western Pacific area. They include the Marshall Islands, Mariana Islands, the Caroline Islands, and others. Some islands have no permanent residents and others are densely populated. The economy of these islands is based primarily upon subsistence agriculture and fishing. Tree crops and root crops provide the staple vegetable diet and are sufficient in quantity and easily cultivated on most of the islands. Seafoods also are plentiful. Coconuts are produced in large quantities and large amounts of copra are exported from some islands. Inshipments of foods are relatively small. The High Commissioner for the Trust Territory states that, "as a result of our analysis, we have concluded that we should not undertake a food stockpiling program in the Trust Territory."

The civilian population of American Samoa is about 20,000. Fish, coconuts, yams, breadfruit and other fruits are the principal foods that are produced locally. Inshipments of other foods are obtained from nearby sources, such as New Zealand, Western Samoa, Australia and Hawaii, although some foods normally come from the U.S. mainland. The Governor of American Samoa has analyzed the food situation and has concluded that "stockpiling

* This excludes food for U.S. military personnel.

of food (there) is neither necessary nor desirable." He has considered the effects of wars and hurricanes and has studied the problems of supply and storage. He indicates that any interruption of transportation would extend over a period no longer than 60 days and that the Territory has a good supply of local foods. He states that conditions are unfavorable to stockpiling food. This is based on an experience by the Navy in which it was found that dehydrated foods had to be used after 60 days in order to prevent spoilage. Stockpiling food, therefore, is not recommended for American Samoa.

### FOOD STOCKPILE MANAGEMENT

A plan for management of stockpiled foods needs to be determined prior to the establishment of a food stockpile. The reports of some of the governors of the offshore areas recommend stockpiling a large variety of foods under a program which would provide for execution of agreements with food processors and distributors for procurement and management of the food held for emergency use. These proposals indicate, or imply, the use of Federal funds to construct or adapt additional storage facilities for stockpile use and to pay the expense of holding and managing the stockpiles. An alternative procedure would be to establish a stockpile composed largely of surplus foods acquired in price support operations. This, however, would require processing facilities.

Many problems would be encountered in the maintenance of adequate food stockpiles. It would be necessary, for example, to provide frequent inspection of any stocks being held under contract with private firms in order to assure that the agreed-upon amounts were on hand and properly rotated. There would need to be a maximum and a minimum rate of movement in and out of storage for which payments would be authorized. It would be necessary to specify conditions under which private dealers would be permitted to deplete the stockpile. This might include war, shipping strikes, natural disasters, and other situations that would cause a shortage of food from normal sources and would require the immediate use of stocks being held for emergency uses. Plans would also be needed for distribution of stockpiled foods for use in an emergency.

It might be preferable to establish food stockpiles in offshore areas according to a plan that would depend entirely on Government ownership and management with rotation of "old" stocks either through the trade, Government outlets, or, possibly for livestock feed. This type of program probably would involve mostly unprocessed grains, flour, rice, dry beans, dry skim milk, and fats or oils. These could be stored for long periods and used to supplement locally produced items and would sustain life in an emergency.

Processed foods in a Government owned and managed stockpile might be rotated into use through various Government programs which distribute foods for school lunches, charitable organizations and other outlets. It is unlikely, however, that these Government outlets could dispose of the quantities of foods needed in a large food stockpile unless the foods are held 2 or more years. The volume of foods to be held in a stockpile might be as much as 10 or 15 percent of a year's supply for the entire civilian population of these offshore areas. This is much more food than the civilian government agencies normally handle in all of their food programs in a year.

A modified Government-managed stockpile might be developed, using Government funds to provide warehoushes and to purchase the food, but depending on private dealers for rotation of "old" food into use. As a means of rotating stocks, agreements by private dealers might be developed for their purchase, periodically, of certain amounts of stockpiled foods. Such a stockpile could also be used to supply food for certain public assistance programs such as the school lunch program.

The selection of foods and kinds of containers to be included in a stockpile would be very important in stockpile management. Standard brands and packages would be relatively easy to move into trade channels without loss of value. Their initial costs, however, would be high and the necessary frequency of turnover would increase management costs. In some of the offshore areas, some of the standard food items would be unsuited to storage for even 6 months without refrigeration. Also, some regularly used containers would not provide satisfactory protection from contamination by radioactive fallout. Many commercial food items are bulky, costly, and not essential for emergency use. It would seem practical, therefore, for any stockpile to contain only a minimum number of the most storable items. In fact, the lowest cost of stockpile management might result from holding foods as long as they would be edible.

For a low cost stockpile, whole grains such as rough or brewer's rice, wheat, corn, and soybeans should be utilized as much as feasible. These could be stored for long periods, especially if in special containers, and, if not needed as food, could be moved into livestock feed or other nonfood uses at the end of their useful life for food. For such a low-cost stockpile, rice, other cereals and dry beans, for example, might constitute the entire stockpile in Hawaii. In Puerto Rico, these items probably could constitute about 75 percent of the tonnage of a stockpile of selected foods. The feasibility of stockpiling such unprocessed foods, however, would depend on local tastes and would require minimum processing facilities for emergency use.

*Storage conditions and facilities.*—All offshore areas of the United States, except Alaska, are in or near the Tropics. The warm and humid climates of these areas make food storage difficult and expensive. Special care and packaging are necessary to prevent quick spoilage of many items. By contrast, severe winters and difficult transportation in Alaska would hamper the management of a stockpile in that area. It is essential, therefore, that more detailed consideration be given to these problems before preparation of final plans for large-scale food stockpiling in offshore areas.

The relative advantages of cool storage and dry storage must be determined. The decision should be made largely on the basis of the relative economy of operation of the stockpile. Most items packed in tin may be held safely at 50° F. for 2 to 5 years, and some can be held 10 to 15 years. In contrast, without refrigeration in the Tropics, many of the same items would deteriorate seriously if held longer than 1 year. It is estimated that the annual cost of cool storage is about $1 per hundredweight more than dry storage. It is desirable, therefore, that consideration be given to the possible economic advantage of using refrigerated storage if relatively perishable items are stockpiled.

Experience during World War II is helpful in an appraisal of local problems of food storage in these areas. Dampness and insects are the major causes of deterioration of food in storage in tropical locations. Insects in tight warehouses can be controlled by fumigation and both insects and dampness can be kept away from food by use of special packages, such a metal, glass and plastic. Even tin cans unless properly protected, deteriorate rapidly in the tropical climates of offshore areas. Both rice and salt cod may develop an objectionable yellow color if held too long and lard often leaks out of wooden tierces when held longer than normal periods in the tropics.

The report from Alaska indicates that adequate space is available outside of target areas to store any additional food stocks that may be needed. Unused mines, for example, would be considered. The storage life for stockpiled food would probably be much longer in Alaska than in tropical climates, so that the rotation of foods out of a stockpile into use could be done at less frequent intervals than in other offshore areas. Also, as the report from Alaska states, plans have been made to move the people to the food in an emergency, rather than to move the food to the people.

The report from Hawaii indicates that all of the regularly used food storage facilities are usually filled to capacity and that about 93 percent of this capacity is in target areas. The report indicates, however, that other "adequate storage facilities could be made available without hindering the military requirements." This would include "many buildings and tunnels" that were constructed during World War II for military supply storage on Oahu. Other storage facilities are available on nearby islands from which supplies could be brought to Oahu by barge "in the absence of submarine activity." Adequate dispersion of stockpiles, however, would increase storage costs.

The report of the Puerto Rico Planning Board states, "There is comparatively little comprehensive information in Puerto Rico dealing with storage facilities, inventories, food consumption," et cetera. Data submitted by the Puerto Rico Planning Board indicate that wholesalers' warehouses have a total capacity of 31,960 cubic feet of refrigerated space and 470,144 square feet of other space for food. This does not include warehouses normally used exclusively for sugar or tobacco. Information is not available to indicate capacities and locations of unused space that might be available for food stockpiling.

The Virgin Islands and other small territories and possessions generally have inadequate facilities for storage of a food stockpile, because some foods en route to the Virgin Islands are normally stored in Puerto Rico and moved by barges and other small craft to the Virgin Islands as needed. The Ryukyu Islands apparently have adequate military owned storage facilities for rice on Okinawa. Storage facilities are not available in the Ryukyus for a stockpile of other foods,

but the report from the Governor of Guam suggests that only rice is needed in a stockpile. It recommends also, that foods for a stockpile should be packaged in tin to prevent spoilage. The report indicates the capacities and locations of facilities for storing food, but does not indicate the extent of unused capacity that would be suitable for storage of stockpiled items, if a stockpile were to be established.

*Processing facilities*:—Food processing in Alaska is restricted largely to fish canneries, which are utilized primarily for processing fish for shipment out of the State. These plants produce large supplies of fish during the summer months. About 95 percent of their capacity is outside of target areas. If cans are available during an emergency, large amounts of "scrap" fish might be canned, although this would involve problems of location and seasonality in relation to the regular canning operations. In an emergency, the fish canning plants could double their production, if raw fish, labor, and other requisites were available. This would require advance preparations, including stocks of cans and offseason labor. Other food processing facilities in Alaska are primarily milk plants and bakeries and these supply only a small proportion of the local requirements for these products. It is significant also that about 69 percent of the capacity of bakeries and 77 percent of the capacity of milk plants are in target areas. There are no other processing facilities in Alaska that could contribute major amounts of processed foods in an emergency.

Processing plants in Hawaii produce primarily sugar and fruit products. Nearly all sugar processing plants are outside of target areas, but about 75 percent of the fruit plants are in Honolulu. It is indicated that plants for processing meats, coffee, and other products are mostly in Honolulu. A nuclear attack on Honolulu, therefore, might render inoperative large portions of the processing capacity, except for sugar. The remaining fruit canning plants outside of Honolulu, however would be able to process adequate amounts of their products to meet the needs of Hawaii if cans were available and if they were operating at near normal capacity. Cans would probably be the limiting item.

Food processing plants in Puerto Rico produce a wide variety of products. Sugar plants predominate in volume of production and nearly all of them are outside of target areas. Dairy plants are second in importance with 90 percent of their capacity in large cities. Canning plants and bakeries also are important and about half of their capacities are in potential target areas. Meat packing plants and coffee roasters, presumably, are included in the miscellaneous group, which has about 90 percent of its capacity in target areas. Grain processing plants are primarily outside of target areas, although, a new flour mill is being built on the west side of San Juan Harbor. A nuclear attack on target areas in Puerto Rico, therefore, could greatly reduce the capacity of Puerto Rico to produce the processed products that it would need.

The Virgin Islands generally buy their food in processed form. Even sugar cane is shipped out for processing. There are some small processing facilities, such as slaughter houses, bakeries, and milk plants, but very little information is available concerning them.

The Ryukyu Islands have four plants producing sugar, a flour mill and a noodle factory. All, except one sugar plant, are on Okinawa. All of these plants operate near capacity.

### STOCKPILE COSTS

The high cost of food stockpiles is a major deterrent to their establishment. A food stockpile would involve a continuing investment in food by rationing and some expense for construction or improvement of warehouses and facilities. Also, there would be management costs for supervision, storage, rental, inspection, handling, transportation, processing, packaging, interest, and depreciation of stockpiled foods. If stockpiling is undertaken, these costs probably should be shared by the Federal Government and the governments of the offshore areas charged to civilian defense.

The report from Hawaii includes some information in regard to anticipated costs of a food stockpile. The report indicates that initial costs per ton of rice would be $185, and that some canned meats would cost as much as $900 per ton. A stockpile of staple items would be less costly than a stockpile that contained a complete assortment of standard brands and packages, even though price depreciation might be greater on the staples. The stockpiling of unmilled rice, wheat, and corn would require that minimum processing facilities be available in nonvulnerable locations.

It is estimated that average costs of staple items in Commodity Credit Corportion stocks would be about $200 per ton, including special packages. By contrast, a more complete assortment of finished processed products in standard retail packages probably would cost $400 per ton. The total acquisition and packaging cost of stockpiles for Puerto Rico, Hawaii, and Alaska, therefore, would be about $9 million if only items in CCC stocks were included. The initial cost of a more complete selection of processed foods probably would cost nearly $20 million to provide stockpiles for these three areas, assuming a period of 60 days without inshipments. Other initial costs in these areas probably would be close to $1 million. Annual costs of management would be substantial and would vary widely, probably between 10 percent and 20 percent of initial costs, depending on types of commodities and other factors.

Additional study of costs as a basis for choosing between alternative types of foods and methods of stockpile management, and for detailed planning.

### CONCLUSIONS

Under the assumptions used for this analysis, it appears that stockpiles of foods for use in case of an attack on this country may be justifiable for Hawaii, Alaska, Puerto Rico, the Virgin Islands, and possible other areas that are heavily dependent on ocean shipping.

Before detailed plans are made to stockpile any food, more information is required in regard to the normal stocks of food at wholesale and retail. Additional data is also needed on seasonal variations in stocks and production. Other factors that require further study include the possible increased use of local products, and the probable losses of food resources and population in event of a nuclear attack. Estimates are needed in regard to the amounts of shipments of food that could be moved subsequent to an attack to each offshore area in spite of enemy actions. Perhaps, the assumed uniform period of 60 days without inshipments is unrealistic, and should be increased for some areas and reduced for others.

The reports from the offshore areas generally recommend the stockpiling of a large number of items in the usual types of packages in order to promote ease of rotation of stocks into the channels of trade. The practicality of such a stockpile, however, depends on whether the food wholesalers are willing to buy foods from the stockpile at prices comparable to replacement costs. The cost of such a stockpile must be compared with the probable cost of a stockpile of a more limited selection of staple foods. Another question is in regard to the proportions of processed foods and unprocessed foods that should be included in each locality.

It is estimated that food supplies for stockpiles to make total supplies sufficient for 60 days in Hawaii and Puerto Rico would cost about $3 to $5 per capita for the population to be served. The cost would be relatively high in Alaska, probably $10 per person, primarily because of the greater extent of dependence on offshore sources for food in Alaska. Other costs of installing a stockpile would be substantial. Annual costs of rotating the stocks and for administration probably would be nearly as much as the original cost of food for the small pilot operations.

A major question involved is how closely any stockpile should be held to mere survival level, in the event there is a stockpile established. One method deserving consideration for analyzing the problems of obtaining local participation in rotating food in a stockpile and for solving other management problems would be to establish small pilot-type food stockpiles. One pilot food stockpile in each of Alaska, Hawaii, and Puerto Rico should provide the experience necessary to determine both the most feasible procedures and the practicality of food stockpiling. At the same time, those people developing and managing these pilot stockpiles would be able to obtain other needed information, such as the amounts of local food stocks and the availability, location, and cost of suitable storage facilities.

Any pilot stockpile could be in the normal trade area for a small city and planned to supply that area in event of an attack. It could contain supplies of Government owned surplus commodities, such as rice, dry beans, dry milk, and other cereals, packaged to meet local storage conditions. Where it is possible to make satisfactory contracts or arrangements with local food wholesalers to rotate processed foods in consumer packages, the stockpiling would also contain mutually agreed upon amounts of such items. Any pilot stockpile pro

gram could be used to develop a satisfactory type of contractual arrangement for rotating commercial foods from stockpile through commercial trade channels and for rotating stocks of surplus food commodities. Experience with a pilot stockpile, also, would aid in determining storage life under local conditions in these areas.

The question of who would manage and finance any food stockpiles has not been resolved. This responsibility will depend, in part, on whether such food stockpiles are determined to be more comparable to retail food stocks, which are the responsibility of the State, Territory or Commonwealth government and the local people, or to wholesale and processor food supplies which are the responsibility of the Federal Government. It appears necessary, in any case, that any food stockpiling program must have the support and participation of local governments, the State Commonwealth or Territory government and the appropriate Federal agencies.

TABLE I.—*Alaska: Estimated tonnages of foods available for civilian use, and percent of calorie value derived from inshipments and from food groups*

| Item or group | Long tons per year | | | Food energy supply | |
|---|---|---|---|---|---|
| | Production [1] | Inshipments [2] | Consumption [3] | Percent inshipments | Percent of total |
| Meat group, total | 1,659 | 12,055 | 13,571 | 92.6 | 21.1 |
| Red meat, all | 223 | 11,130 | 11,210 | 98.0 | 18.8 |
| Poultry and eggs | 351 | 670 | 1,021 | 62.1 | 1.1 |
| Fish | [4] 1,085 | 255 | [4] 1,340 | 3.0 | 1.2 |
| Dry beans, peas and nuts [5] | 0 | 0 | 0 | 0 | 0 |
| Milk group, total | 6,700 | 5,025 | 11,725 | 68.9 | 10.1 |
| Fresh milk | 6,700 | 0 | 6,700 | 0 | 3.1 |
| Canned milk | 0 | 2,370 | 2,370 | 100.0 | 2.3 |
| Dry milk and cheese | 0 | 880 | 880 | 100.0 | 2.2 |
| Other milk products [6] | 0 | 1,775 | 1,775 | 100.0 | 2.5 |
| Fats and oils, total [5] | 0 | 700 | 700 | 100.0 | 4.3 |
| Butter and margarine [5] | 0 | 0 | 0 | 0 | 0 |
| Other [5] | 0 | 700 | 700 | 100.0 | 4.3 |
| Cereals and grains, total | 0 | 47,595 | 47,595 | 100.0 | 47.3 |
| Flour and flour mixes | 0 | 6,625 | 6,625 | 100.0 | 16.4 |
| Other cereals and miscellaneous [7] | (8) | 40,970 | 40,970 | 100.0 | 30.9 |
| Fruits and vegetables, total | 6,514 | 17,945 | 24,459 | 64.3 | 8.2 |
| Potatoes, white and sweet | 5,714 | (8) | 5,714 | 0 | 2.8 |
| Canned fruits and vegetables [5] | 0 | 2,245 | 2,245 | 100.0 | 1.0 |
| Other fruits and vegetables | 800 | 15,700 | 16,500 | 95.8 | 4.4 |
| Sugar and sweets | 0 | 3,680 | 3,680 | 100.0 | 9.0 |
| Total foods | 14,873 | 87,000 | 101,730 | 92.2 | [8] 100.0 |
| Animal feeds | [9] 25,000 | 4,220 | 29,220 | [9] 14.4 | |

[1] Production data are compiled from information provided by the Governor of Alaska.
[2] Shipments are derived from "Waterborne Commerce of the United States", by the Department of the Army for 1955.
[3] Outshipments are excluded.
[4] Based on local consumption, only, at the rate of 20 pounds per capita annually.
[5] Data are unavailable or known to be incomplete.
[6] "Other" milk products are unknown as to major items, but are assumed to be represented by ice cream, i.e., for estimating caloric value.
[7] "Miscellaneous" includes canned items and other dry groceries not otherwise included in this table. The energy value is estimated at 500 calories per pound.
[8] The calculated daily supply of food energy is about 2,800 calories per capita for the 145,000 people dependent on civilian supplies.
[9] Based on tonnage of concentrates.

TABLE II.—*Hawaii: Estimated tonnages of foods available for civilian use, and percent of caloric value derived from inshipments and from food groups*

| Item or group | Long tons per year [1] | | | Food energy supply | |
|---|---|---|---|---|---|
| | Production | Inshipments | Consumption | Percent from inshipments | Percent of total food supply |
| Meat group, total | 26,161 | 19,152 | 42,188 | 46.7 | 17.8 |
| Red meats | 13,036 | 10,580 | 23,259 | 45.5 | 11.8 |
| Poultry and eggs | 5,982 | 4,420 | 10,402 | 42.9 | 3.2 |
| Fish | 6,741 | 3,125 | 7,366 | 42.4 | 2.0 |
| Dry beans, peas, and nuts | 402 | 1,027 | 1,161 | 88.5 | .8 |
| Milk group, total | 40,179 | 16,920 | 57,010 | 56.9 | 13.1 |
| Fresh milk | 40,179 | 0 | 40,179 | 0.0 | 5.6 |
| Canned milk | 0 | 893 | 893 | 100.0 | .3 |
| Dry milk and cheese | 0 | 982 | 893 | 100.0 | .7 |
| Other milk products | (2) | [3] 15,045 | 15,045 | 100.0 | 6.5 |
| Fats and oils, total | 0 | 4,063 | 4,063 | 100.0 | 6.5 |
| Butter and margarine | 0 | 2,857 | 2,857 | 100.0 | 4.3 |
| Other | (2) | 1,206 | 1,206 | 100.0 | 2.2 |
| Grains and cereals, total | 268 | 67,768 | 68,036 | 99.6 | 41.3 |
| Flour and flour mixes | 0 | 19,152 | 19,152 | 100.0 | 14.5 |
| Rice | 268 | 28,170 | 28,438 | 99.0 | 22.1 |
| Other and miscellaneous [4] | (2) | 20,446 | 20,446 | 100.0 | 4.7 |
| Fruits and vegetables, total | 39,617 | 57,411 | 89,552 | 71.2 | 9.8 |
| Potatoes, white and sweet | 938 | 10,759 | 11,096 | 92.0 | 1.7 |
| Other starchy items | 4,196 | 0 | 4,196 | 0 | .6 |
| Canned items | [5] 2,920 | 26,518 | 28,080 | 92.8 | 3.5 |
| Other | 31,563 | 20,134 | 45,580 | 53.7 | 4.0 |
| Sugar and sweets, total | [6] 12,575 | 2,321 | 14,955 | 1.2 | 11.5 |
| Coffee, green basis | 4,420 | 1,295 | 1,607 | [8] 80.6 | 0 |
| All foods, total | 123,220 | 168,930 | [7] 277,411 | 71.2 | 100.0 |
| Animal feeds, total | [9] 446 | 87,411 | 87,857 | [8] 99.5 | 100.0 |

[1] Production data (marketings) and domestic shipments are compiled from "Statistics of Hawaiian Agriculture," 1956. Other shipments are from "Waterborne Commerce of the United States," 1955. Outshipments are considered in calculating consumption.

[2] Amounts are believed to be negligible.

[3] "Other" milk products are unknown as to major items, but are evaluated on the basis of the calories in ice cream. This may overstate the calorie value.

[4] "Miscellaneous" includes various canned items and other dry groceries not otherwise included in this table. The calorie value is assumed to be 500 per pound.

[5] Includes only amounts consumed locally, estimated at 13 pounds per capita.

[6] Includes only the sugar consumed locally, excluding amounts used to process pineapples, estimated at 56 pounds per capita.

[7] About 2,670 calories per capita daily.

[8] Based on tonnage.

[9] Concentrates only.

TABLE III.—*Puerto Rico: Estimated tonnage of food and feed supplies for civilian use and percent of caloric value derived from inshipments and from food groups*

| Item or group | Long tons 1956–57 [1] | | | Food energy supply | |
|---|---|---|---|---|---|
| | Production | Inshipments | Consumption [2] | Percent from inshipments [3] | Percent of all foods |
| Meat Group, total | 51,758 | 102,658 | 140,456 | 71.8 | 14.0 |
| Red meat, all | 18,830 | 42,626 | 61,074 | 69.8 | 6.2 |
| Poultry meat | 5,967 | 4,875 | 10,841 | 45.0 | .7 |
| Eggs | 4,943 | 5,529 | 10,472 | 52.8 | .6 |
| Fish | 2,560 | 22,156 | 19,683 | 100.0 | 1.1 |
| Dry beans and peas | 10,753 | 26,968 | 36,945 | 73.0 | 5.2 |
| Nuts and coconuts | 8,705 | 504 | 1,441 | 35.0 | .2 |
| Milk Group, total | 325,362 | 24,896 | 350,232 | 18.9 | 11.7 |
| Fresh milk | 322,147 | 40 | 322,187 | .0 | 9.1 |
| Dry milk and cheese | 45 | 7,697 | 7,741 | 99.4 | 1.2 |
| Other milk products | 3,170 | 2,150 | 5,299 | 40.6 | .5 |
| Canned milk | 0 | 15,009 | 15,005 | 100.0 | .9 |
| Fats and oils, total | 0 | 40,286 | 40,274 | 100.0 | 14.7 |
| Butter and margarine | 0 | 3,296 | 3,296 | 100.0 | 1.0 |
| Other fats and oils | 0 | 36,990 | 36,978 | 100.0 | 13.7 |
| Grains and cereals, total | 9,546 | 197,808 | 206,105 | 96.1 | 31.8 |
| Flour and flour mixes | 134 | 51,776 | 50,815 | 100.0 | 7.7 |
| Rice | 2,321 | 139,553 | 141,854 | 98.4 | 22.1 |
| Other and miscellaneous [4] | 7,091 | 6,479 | 13,436 | 48.2 | 2.0 |
| Fruits and vegetables, total | 303,265 | 146,632 | 424,583 | 32.5 | 10.7 |
| Potatoes, white and sweet | 18,396 | 39,300 | 54,833 | 71.7 | 1.6 |
| Other starchy items | 164,734 | 8,571 | 173,305 | 5.9 | 4.7 |
| Canned items | 9,150 | 67,268 | 67,547 | 97.9 | 1.6 |
| Other | 110,985 | 31,493 | 128,898 | 19.3 | 2.8 |
| Sugar and sweets, total | [5] 105,765 | 6,133 | 110,180 | 4.2 | 17.1 |
| Coffee, green basis | 6,920 | 3,137 | 9,232 | [6] 34.0 | .0 |
| All foods, total | 802,616 | 521,550 | 1,281,062 | 61.7 | [7] 100.0 |
| Animal feeds [8] | 10,748 | 110,118 | 120,679 | [6] 91.2 | 100.0 |

[1] Data are derived from the stockpile report by the Puerto Rico planning board.
[2] Excludes outshipments. Data are totals for the year.
[3] Includes some reshipments (out).
[4] Miscellaneous includes some canned items and dry groceries not otherwise included in this table.
[5] Production of sugar shown is for local use only.
[6] Based on tonnage.
[7] About 2,950 calories per person daily.
[8] Concentrates only.

## FEDERAL AVIATION AGENCY

FEDERAL AVIATION AGENCY,
*Washington, D.C., November 2, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production, Old Senate Office Building, Washington, D.C.*

DEAR MR. BROWN: This is in reply to your letter of August 10, 1959 requesting a factual summary of the mobilization activities of this Agency during the past year.

The Federal Aviation Agency began its operations on December 31, 1958 pursuant to section 1505 of the Federal Aviation Act of 1958. Since that time the principal moblization program of this Agency has been directed toward insuring the continous operation during a war or national emergency of the system of air transportation and traffic control, aeronautical communications, and aids to air navigation.

The attached report provides a detailed summary of all Agency mobilization programs and activities. It has been prepared according to the form suggested in your letter.

I hope that the information contained in our report will be sufficient to enable your committee to carry out its responsibilities. If this Agency can be of any further assistance, please do not hesitate to call upon us.

Sincerely,

JAMES T. PYLE, *Deputy*
(For E. R. Quesada, Administrator).

1. MOBILIZATION PROGRAMS CONDUCTED BY THE FEDERAL AVIATION AGENCY

(*a*) *Support of military air operations*

One of the principal mobilization programs of the Federal Aviation Agency is directed toward insuring the continuous operation during a war or national emergency of the system of air traffic control, aeronautical communications, and aids to air navigation required for the support of military air operations. This program involves the various measures necessary to insure continuity of Federal Aviation Agency operations throughout the United States, the Commonwealth of Puerto Rico, and the U.S. possessions. Although directed primarily to the support of military air operations, the emergency preparations made in this program will also insure a postattack capability for support of essential civil air operations.

(*b*) *Civil aviation capability*

A positive program for improving the wartime capability of the civil air transport system is under development in the Agency. The Federal Aviation Agency has concluded that it would be in the national interest, in peace and war, to have in being an efficient air cargo fleet, based upon the development of an uncompromised cargo aircraft suitable for military logistical and commercial use. Plans are also being made to insure that adequate air transport capability, with effective ground support, is available after a nuclear attack on the United States through protection of operating facilities, equipment and personnel.

(*c*) *Resources management*

Two major civil aviation priorities and allocations programs are conducted by the Federal Aviation Agency under authority of the Defense Production Act of 1950, as amended. These programs relate to priorities and allocation of controlled materials needed to support the development, manufacture, and maintenance of (1) air-carrier aircraft, and (2) the Federal airways and supporting units system of air navigation facilities.

(*d*) *Continuity of Government*

This program includes the Federal Aviation Agency's preparations for maintaining adequate executive direction during national emergency and emergency relocation of headquaters organizations pursuant thereto. It includes also the various preparations necessary to insure the security of the Agency's personnel during an emergency.

2. AUTHORITY FOR PROGRAMS

(*a*) *Support of military air operations*

This program is specifically authorized and directed in section 302(e) and section 307 of the Federal Aviation Act of 1958 which require the effective discharge of the functions of the Agency in the event of war and full consideration to the requirements of national defense. Section 1202 of the act authorizes the security control of air traffic in the interest of national security.

In accordance with these statutory directives, agreements have been reached involving services now performed by the Federal Aviation Agency in support of the air defense of the Nation and other extraordinary services this Agency is required to perform during a national emergency. Some examples of these agreements are:

Plan for security control of air traffic and electromagnetic radiations during an air defense emergency (SCATER), May 7, 1957;

Agreement relating to joint use of certain facilities with the Department of Defense, January 9, 1958;

Agreement for fighter-interceptor operations with the commander in chief, Continental Air Defense Command, December 1, 1955;

Memorandum of understanding with the Continental Air Defense Command, July 21, 1957; and

Memorandum of understanding with the Deputy Chief of Naval Operations (Air) regarding operation of Federal Aviation Agency and U.S. Navy approach control and radar facilities within the continental limits of the United States, March 28, 1958.

(*b*) *Civil aviation capability*

Under the Federal Aviation Act of 1958 the Administrator is responsible for the adequacy of facilities, equipment and personnel required for air transport operations in peace and war. Section 305 of the act directs the Administrator to encourage and foster the development of civil aeronautics and air commerce; section 306 directs the Administrator to give full consideration to the requirements of national defense in discharging the duties imposed by the act.

(*c*) *Resources management*

The Federal Aviation Agency priorities and allocations functions are derived from the Defense Production Act of 1950, as amended; Executive Orders 10219, as modified; 10480; 10773; and Defense Mobilization Order VII–5. They are administered under U.S. Department of Defense delegation (effective January 1, 1959).

(*d*) *Continuity of Government*

The Federal Aviation Agency's authorities and responsibilities for the maintenance of executive direction during a national emergency are derived from the Federal Aviation Act of 1958 and Executive Order 10346, "Preparation by Federal Agencies of Civil Defense Emergency Plans."

3. SUMMARY OF PROGRAMS

(*a*) *Support of military air operations*

As proprietor of the common civil-military system of air traffic control, aeronautical communications, and aids to air navigation, the Federal Aviation Agency has the basic mobilization problem of insuring the maximum possible continuity of its operations in support of the Nation's air defense efforts during an emergency and post-attack civil-military survival operations. This involves direct military support to the Air Defense Command, the Strategic Air Command, the Tactical Air Command, the Military Air Transport Service, and the air arms of the U.S. Navy and the U.S. Army.

By virtue of its assigned responsibilities and existing agreements with the Department of Defense, the Federal Aviation Agency is committed to performing continuously throughout the preemergency, attack, and postattack period a variety of services that include, among others, the following:

Full operation of the Federal airways system at maximum effectiveness, particularly air traffic control, communications and air navigation facilities;

Expeditious and effective execution of the plans for security control of air traffic;

Full aircraft movement information service (AMIS) from Federal Aviation Agency air traffic control facilities to Air Defense Command facilities;

Expeditious air traffic control service to active air defense missions and fighter-interceptor aircraft;

Effective joint operation and maintenance of civil-military radar facilities;

Expeditious transmission of reports on vital intelligence sightings to appropriate military headquarters;

Positive and expeditious identification of inbound aircraft over oceanic areas;

Operation of the central altitude reservation facility (CARF) to coordinate airspace reservations;

Operation of military radar approach control facilities;

Providing ground-to-air communications services for military flights;

Participation in provision of radar weather advisory service by air defense facilities;

Transmitting aircraft movement messages for all military flights originating at other than military bases; and

Providing access to and use of FAA-teletypewriter systems to military users.

Operational plans for these various military air defense support activities were kept in a high degree of readiness throughout fiscal year 1959. They were given continuing attention; they were periodically tested. When required by changing circumstances, the operational plans are modified and revised in collaboration with the Department of Defense.

To insure operational continuity in a post-attack period characterized by widespread radioactive fallout requires a radiological monitoring capability adequate for the detection and measurement of radiological hazards at all places where essential Federal Aviation Agency operations are conducted. During fiscal year 1959 the Federal Aviation Agency continued its program for the development of radiological monitoring capability at all air traffic control facilities. Portable radiological monitoring instruments were provided to all such facilities and more than 1,000 employees were trained in the operation of these equipments.

To fulfill commitments to the Department of Defense, Federal Aviation Agency personnel must remain on duty and in operation to the maximum possible extent during an emergency (when other elements of the civilian population may be evacuated or sent to shelter). Consequently, radiological defense capability of a high order is required. Plans toward that end are well developed. The results of such planning are reflected in the construction of buildings designed for certain operations of the Agency vital to the national security.

(*b*) *Civil aviation capability*

This program has two objectives: (1) to promote the development of a national air cargo capability through an essentially self-sustaining commercial air cargo fleet with global capability, and (2) to prepare the civil air transport industry for operations during a war or national emergency. During fiscal year 1959 planning for the achievement of both of these objectives was initiated in the newly created Federal Aviation Agency.

(*c*) *Resources management*

Federal Aviation Agency activities with respect to priorities and allocations during fiscal year 1959 were primarily of three types—those relating to air carrier aircraft requirements, the Federal airways and supporting units requirements, and miscellaneous priorities and materials.

(1) *Air carrier aircraft.*—The first part of this program deals with the establishing of production schedules to assure priority support for the manufacture of civil air carrier aircraft; the second part deals with priorities for maintenance, repair, and operating supplies and equipment for air carrier aircraft.

The Federal Aviation Agency prepared and submitted quarterly requirements to the Aircraft Claimant Subcommittee of the Air Coordinating Committee for new civil air-carrier type aircraft for both United States and friendly foreign airlines. The Air Coordinating Committee approved and forwarded them to the U.S. Department of Defense Aircraft Production Resources Agency (now Joint Aeronautical Materials Activity) for use in approving the manufacturers' requests for priority authority and controlled materials allotments to implement the scheduled production.

With respect to the maintenance, repair, and operating supplies for aircraft operated by both domestic and friendly foreign airlines, the Federal Aviation Agency exercises alloting agency responsibilities. In this connection, the Agency (1) presented quarterly requirements for allotments of controlled materials to the U.S. Department of Defense; and (2) obtained ratings that provided priority assistance for air carriers comparable to that available to military elements.

In administering the air carrier maintenance, repair and operation program, the Agency transferred allotments and rating authority to designated agents of domestic airlines and to the Bureau of Foreign Commerce, U.S. Department of Commerce (for airlines coming under its cognizance) and applied ratings to purchase orders of airlines in countries coming under cognizance of the International Cooperation Administration.

The Federal Aviation Agency also carried on an emergency repair parts program to assist domestic airlines when threatened with grounding of aircraft because of lack of parts. Through agreement between the U.S. Air Force and the Federal Aviation Agency, the Air Force (upon certification of an emergency by the Federal Aviation Agency) diverted from its stocks parts needed to prevent interruption of U.S. airline service.

(2) *Federal airways and supporting units.*—The Federal Aviation Agency administered the collection of requirements for the development, establishment, and maintenance of the Federal airways system, including requirements of the agency itself and those of the Airways Modernization Board (now the Bureau of Research and Development of Federal Aviation Agency) and Aeronautical Radio, Inc. It presented such requirements to the U.S. Department of Defense for issuance of allocations. The Agency provided for control of allotments, including accounting control, and the issuance of priority authority for the Federal airways and supporting units program.

(3) *Miscellaneous priorities and materials.*—Under the defense materials system, the manufacture and maintenance of noncarrier aircraft do not qualify for priorities and allocations. However, in keeping with Air Coordinating Committee policy, the Federal Aviation Agency collected requirements in terms of aircraft units needed for defense-supporting civil activities such as executive, agricultural and industrial flying. These requirements were incorporated in quarterly production programs and submitted to the Air Coordinating Committee for approval. The approved noncarrier aircraft programs were forwarded to the Department of Defense Aircraft Production Resources Agency for information as to available productive capacity and for integration with the civil air carrier and military programs to form the complete U.S. aircraft production program.

#### 4. EFFECTIVENESS OF THE PROGRAMS

*(a) Support of military air operations*

The Federal Aviation Agency is in a satisfactory state of readiness with respect to the operational plans for certain specific emergency actions, such as the security control of air traffic and the execution of its portion of conelrad. On these matters the Administrator has clear authority and the necessary authorizations and resources to take required actions. There are, however, a number of weaknesses in the Agency's state of emergency readiness. Programs for dispersal and protective construction of essential air traffic control facilities are only partially complete. Special personnel arrangements necessary for the Federal Aviation Agency will not be acted upon until the Congress meets in 1960. A considerable improvement in radiological monitoring capability is necessary to protect the Agency's maintenance personnel who must keep the Federal airways system in operational condition during wartime or restore it to operation if damaged.

*(b) Civil aviation capability*

This program was initiated only after the establishment of the Federal Aviation Agency during fiscal year 1959. Only preliminary planning was accomplished during the period covered by this report.

*(c) Resources management*

The priorities and allocation system is functioning adequately for current needs and could be readily adapted to more intensive use under emergency conditions.

(1) *Air carrier aircraft.*—The Air Coordinating Committee approved production of 638 air carrier aircraft during the period July 1, 1959 through December 31, 1961. With respect to maintenance, repair and operating supplies for air carrier aircraft, an adequate allotment of controlled materials to meet the needs of participating domestic and friendly foreign carriers was made. Defense order ratings to the extent of approximately $41 million each quarter were issued for this purpose.

(2) *Federal airways and supporting units.*—Allocations of controlled materials received from the U.S. Department of Defense were made available for the development, establishment, and maintenance of air navigation facilities in amounts adequate to carry on the expansion program of the Federal Aviation Agency. The use of military allotment symbols and priority ratings for equipment and supplies permitted continuation of this program without serious delay.

(3) *Miscellaneous requirements.*—The noncarrier aircraft production program presented by the Federal Aviation Agency was approved by the Air Coordinating Committee. This forms the basis for the scheduled manufacture of 8,930 airplanes in the calendar year 1960 and 9,050 in 1961, thus contributing to the stability of aircraft production output which is so important to the continuation of essential noncarrier civil aviation.

*(d) Continuity of Government*

The Federal Aviation Agency has emergency relocation plans, which provide for the relocation of its national and regional headquarters in the event of an attack on the United States or its imminence. These plans are periodically evaluated. Reevaluation of the plan is currently in progress with specific attention being given to the establishment of a peacetime Federal Aviation Agency activity at the relocation site, thereby providing a basis for improving communications and readiness of the site.

The Agency's regional offices in Alaska and Hawaii are unable to make conventional arangements for emergency relocation sites, such as are made by the U.S. Government agencies generally within the United States. Appropriate non-Federal facilities are scarce and, where they do exist, they are located in areas just as vulnerable to attack as the regular headquarters. Consequently, extraordinary preparations will be required to insure continuity of executive direction for the Federal Aviation Agency in both Alaska and Hawaii.

5. CURRENT NEED FOR THE PROGRAMS

*(a) Support of military air operations*

The common civil-military system of air traffic control, aeronautical communications, and aids to air navigation is an essential element of the national defense, as well as a key factor in the civilian economy. The Department of Defense and the Federal Aviation Agency are engaged in a broad effort to develop a compatible environment in which all aircraft, regardless of mission, can be safely and efficiently accommodated. A vital element on which the successful execution of this program depends is the assurance of uninterrupted availability and responsiveness of the facilities and personnel of the Federal Aviation Agency's air traffic control system in the event of war or national emergency.

*(b) Civil aviation capability*

The United States does not now have a capable, effective, economical, and responsive air logistics capability to support military operations in a limited war situation. Present military transport capability is marginal in terms of present needs and obsolete in terms of equipment. Moreover, a nuclear attack on the United States would undoubtedly cause severe damage to all systems of surface transportation. By its nature, the air transportation system can sustain considerable damage without major disruption, since aircraft obviously need not follow fixed routes and can be operated between any two available terminals. Even where surface transportation might still be functioning, a nuclear attack would so increase requirements for flexibility and speed that overwhelming increases in the need for air movements would be certain to occur. An adequately functioning air transport system in a postattack period would require maximum use of surviving aircraft, civil airport, aircraft repair stations, and other civil aviation facilities needed for the support of air movements. Appropriate planning and preemergency preparations for reducing air transport vulnerability and improving emergency operating capability are vitally necessary.

*(c) Resources management*

In the light of existing conditions, the current programs operated on a standby basis must be continued and kept adaptable to more extensive application.

(1) *Air carrier aircraft.*—During the Korean emergency, the Federal Government recognized that the air carrier aircraft program was so closely connected with the defense effort that the use of military allotment symbols and priority ratings was authorized in its support. Under the defense materials system the defense-supporting aspects continue to be as important as when the decision was made to give the program priority support. Such a program will be required as long as controls on defense production are maintained.

(2) *Federal airways and supporting units.*—The air-navigation facilities installed by the Federal Aviation Agency require high-precision electronic equipment and other related materials. When the defense materials system became effective on July 1, 1953, it was considered by the Civil Aeronautics Administration (now Federal Aviation Agency) and agencies of higher authority, that, because of its close connection with defense, this program should continue to receive priority and allocations support equal to that given military programs. This support was reaffirmed by the Office of Defense Mobilization on January 10, 1956. The continued expansion of the Federal airways system has emphasized

further the soundness of this decision. As long as controls applicable to defense production are continued, the program must be afforded equal status with like military programs.

(3) *Miscellaneous requirements.*—The Federal Aviation Agency must continue to prepare noncarrier aircraft requirements data for submission to the Department of Defense and the Office of Civil and Defense Mobilization so that mobilization planning will take into account this important segment of the aircraft industry. In addition, if any critical shortage should affect the production of such aircraft, the Federal Aviation Agency will present claims for priority assistance where essentiality to the defense effort is shown.

*(d) Continuity of Government*

In view of the Federal Aviation Agency's unique role in supporting military air activity, it must continue to improve its preparations for maintaining effective executive direction over its field operations. It must also be recognized that air transportation would be a critical factor in the Nation's survival after a nuclear attack, since surface transportation systems would be much more severely disrupted by the physical and radiological effects of an attack than air transportation systems.

In an immediate postattack period, when the radiological hazard would be greatest and most widespread, it would be critically important to maintain maximum effectiveness in facilitating the flow of civil air traffic required for relief and rescue missions that do not interfere with higher priority military traffic. The expeditious and timely movement of such basic essentials as blood, food, and water may determine the survival of large numbers of our citizens.

### 6. RELATION TO SMALL BUSINESS

This relationship is of particular concern in connection with the Federal Aviation Agency's priorities and allocations functions. Rated orders issued under the air carrier maintenance, repair and operation program and the Federal airways and supporting-units program were well distributed among both large and small business concerns. Equal priority and allocations support was accorded to all firms, large and small, in accordance with the provisions of the defense materials system.

### 7. MAJOR PROBLEMS IN FEDERAL AVIATION AGENCY MOBILIZATION PROGRAMS

Attaining an adequate state of emergency readiness for the Federal Aviation Agency involves a variety of planning for the utilization of the Agency's facilities and personnel during a national emergency. The extent to which it is feasible to undertake the necessary preparations for coping with the foreseeable effects of a possible attack on the United States is a basic factor in current emergency readiness planning within the Agency.

The Federal Aviation Agency's wartime manpower problem is essentially that of having an adequately trained force-in-being that can be relied upon to stay on the job and respond effectively to vital wartime requirements. Considering the speed and destructiveness of attack in warfare today, it is axiomatic that the agency must be prepared to act effectively, at once, and without interruption if attack comes. The Federal Aviation Act of 1958 directs the Administrator of the Federal Aviation Agency to undertake a study of this problem and to make appropriate recommendations on this matter to the Congress on or before January 1, 1960. However, until the Congress has actually enacted suitable legislation, the special personnel situation of the Federal Aviation Agency will remain a serious mobilization problem.

To insure that the Federal Aviation Agency, operating under wartime conditions, can actually fulfill its civil-military responsibilities is the most serious emergency readiness problem of the agency. Although the Federal Aviation Agency is reasonably well prepared to carry out many of its functions in an emergency, its preparations for coping with an attack do not now include arrangements for assuring the availability of communications. Planned protective construction and dispersal is not yet complete and, in some cases, not yet initiated. Facility defense planning is incomplete and there are inadequate arrangements for stockpiling of food, medical supplies, and other items required for emergency use.

Another aspect of the Federal Aviation Agency's mobilization planning that requires particular attention relates to the effective wartime utilization of

non-Federal civil aviation facilities. The Administrator has not had adequate personnel resources for planning the actions that would be necessary in a post-attack period to insure the maximum capability of the Nation's aviation resources for defense and survival actions.

An adequate functioning air transport system in a postattack period would also require maximum utilization of civil airports, repair stations and other civil aviation facilities required for the support of aircraft movements. The Federal Aviation Agency's role with respect to the emergency readiness of these elements of the National transportation complex is being clarified and plans are being developed for effective nonmilitary defense preparations in the civil aviation industry.

Federal Aviation Agency experience indicates no serious problems in carrying out priorities and allocations functions delegated to the agency in connection with controlled materials programs under the defense materials system.

### 8. CHANGES IN MOBILIZATION PLANNING AND STOCKPILING

During fiscal year 1959, the Federal Aviation Agency continued to improve its plans for coping with wartime conditions reducing vulnerability and improving emergency operational capability; but this involved no major changes in methods or procedures for dealing with an attack or other emergency.

The program for developing radiological monitoring capability was continued during fiscal year 1959 in connection with the agency's responsibilities for the support of military air operations and civil air movements required for survival and recovery operations. Agency policies for dispersal and protective construction of vital facilities, consistent with those of the Office of Civil and Defense Mobilization and the Department of Defense, were developed and applied to construction of new buildings.

The principal change in Agency mobilization planning involved the initiation of a program for improving the effectiveness of the civil air transportation industry in support of a war effort. The Agency developed a program for improving the emergency readiness of the civil aviation industry and submitted a request for funds, which was incorporated in the fiscal year 1960 budget of the Office of Civil and Defense Mobilization for assignment to the Federal Aviation Agency's nonmilitary defense planning functions. No significant planning has heretofore been done to prepare civil air transport industry facilities for operations in wartime; funds appropriated pursuant to the fiscal year 1960 budget request will enable the agency to get this planning under way.

### 9. PROGRESS ACHIEVED IN CONTINUITY AND DISPERSAL

The Federal Aviation Agency is charged by law with providing and operating coutinuously a safe and efficient air traffic control system for the Nation's civil and military air traffic. In carrying out this basic statutory responsibility, the Agency has under way a program for ensuring the wartime operational capability of its air route traffic control centers. These centers are the principal control points of the Federal airways system. The new buildings are urgently needed to incorporate new techniques and equipments required for adequate air traffic control service.

The Administrator and the Secretary of Defense have entered into agreements providing for the collocation of air route traffic control facilities with certain facilities in the air defense system. The protective construction characteristic of these facilities will provide adequate protection against the blast, thermal and radiological effects of nuclear weapons. It thus gives reasonable assurance of the survival of a hard core of air traffic control capability for the support of emergency military air operations and air movements necessary in postattack civil survival and recovery activities.

The remaining air route traffic control centers, which will control air traffic within the general vicinity of the Nation's principal air transportation hubs, are being dispersed and radiologically protected. The Federal Aviation Agency is evaluating the location of each of these buildings, using Department of Defense criteria on vulnerability, with a view to conforming to the maximum possible extent with the provisions of Defense Mobilization Order I–19, which states "It is the policy of the United States to encourage and, when appropriate, to require that new facilities and major expansions of existing facilities important to national security be located insofar as practicable, so as to reduce the risk of damage in the event of attack * * *."

The Administrator of the Federal Aviation Agency has established the following policy for the construction of the new air route traffic control center buildings:

(1) The new centers will be located in general, in the vicinity of the larger traffic hubs which generate the greater part of the center workload in the respective control areas.

(2) Within the vicinity of the larger traffic hubs, the new centers will be located in disbursed locations, that is, outside of the zones of probable damage of critical target areas, wherever it is practicable to do so.

(3) Protection of personnel on duty against the hazard of radioactive fallout will be provided in the construction of the control and equipment wing of the building.

(4) Protective measures other than dispersion and protective construction for center buildings will be pursued further, such as alternate circuitry, definite plans for transfer of control to undamaged centers, and the practicability of standby centers of skeletal capacity at other Federal Aviation Agency facilities.

The location of vital facilities at sufficient distances from the probable point of detonation for a nuclear weapon is an effective countermeasure for dealing with the blast and thermal effects of nuclear weapons. The relocation of the centers away from the probable point of detonation, as contemplated in Defense Mobilization Order I–19, serves not only to protect them from blast and thermal effects; it also protects them against the most intense and complex radiological hazards arising from initial radiation characteristically present in the physically damaged area.

Dispersal at distances of 20 to 30 miles, however, provides no significant protection against the residual radiation hazards of radioactive fallout, which covers much larger areas and may constitute a serious lingering danger to personnel, thus preventing, hampering, or delaying vital operations at remote locations that escape physical damage. Radiologically, protective construction, therefore, is a basic element in the planning of the Agency's dispersed facilities.

### 10. SUMMARY OF STANDBY PROGRAMS FOR FUTURE EMERGENCY

Some of the Federal Aviation Agency's mobilization functions are currently operational; some are conducted on a standby basis; and some are in the planning and development stage.

The successful operation of the civil-military system of air traffic control, aeronautical communications, and aids to air navigation requires that it be able to make the transition from peacetime to wartime operations without faltering or loss of efficiency. Accordingly, the operational aspects of air defense supporting plans are given continuous attention and periodically tested. The conditions of modern warfare dictate a volume and type of peacetime military flying, training, and surveillance activities that place many of the Agency's wartime activities on a current operational basis.

Federal Aviation Agency priorities and allocations functions are primarily on a standby basis. Administration of the air carrier aircraft and the Federal airways and supporting-units programs under the standby defense materials system will be continued in accordance with the regulations and in the light of existing conditions. Likewise, the preparation of noncarrier aircraft production schedules will be continued. The procedures and necessary standby organization will be maintained as long as controls exist so that in the event of partial or full mobilization expansion of this activity may take place with a minimum of delay.

### 11. MOBILIZATION ORGANIZATION

Responsibility for emergency readiness planning and emergency readiness policy has been placed in a newly created Emergency Readiness Division, the Chief of which reports directly to the Assistant Administrator for Plans and Requirements. The Emergency Readiness Division planning staff now includes specialists in the fields of military support, nuclear defense, passive defense, and claimancy. Three members of the staff, including the Assistant Chief, are military personnel. Administration of the priorities and allocations functions is the responsibility of the Defense Requirements Branch of the General Services Division in the Office of Management Services.

Currently operational military support activities are performed by the Bureau of Air Traffic Management. The Bureau of Research and Development is

responsible for the development of appropriate common system equipments in accordance with civil-military requirements.

12. AVAILABILITY OF FUNDS FOR DEFENSE NEEDS

No funds have been appropriated specifically for physical preparations required to insure the continuity of the Federal Aviation Agency's essential functions in wartime or various phases of the Agency's emergency readiness programs. However, funds appropriated for the development, establishment, and operation of the common system of air traffic control, aeronautical communications, and aids to air navigation represent a considerable contribution to the defensive capabilities of the Nation. No funds have been available for certain mobilization requirements; e.g., insuring uninterrupted communications capability; radiological protection of essential operating personnel in existing buildings; adaptation of emergency relocation sites required for effective continuity of executive direction; stockpiling of equipments, supplies and other materials needed for emergency operations; and other similar deficiencies in emergency readiness preparations.

13. FRAMEWORK OF MOBILIZATION PROGRAMS

The Federal Aviation Agency's emergency readiness programs are consistent with the mobilization plans of the Office of Civil and Defense Mobilization and the plans of the Deparment of Defense. The Federal Aviation Act of 1958 directs the Administrator to give full consideration to the requirements of national defense. The objectives of the emergency readiness program are (1) to insure, in the event of a national emergency, the continuity of the Federal Aviation Agency's essential functions throughout the United States and all areas under its jurisdiction and (2) to improve the operational capability of the civil air transportation industry in a national emergency.

14. ACTIONS TAKEN ON RECOMMENDATIONS OF THE JOINT COMMITTEE ON DEFENSE PRODUCTION

The Joint Committee on Defense Production made no recommendations in its eighth annual report that related to the mobilization responsibilities of the Federal Aviation Agency.

15. OTHER PERTINENT INFORMATION

In general, the Federal Aviation Agency believes that in the event of a war opening with the massive exchange of nuclear weapons, survival will be accomlished primarily through the most effective use of the resources and facilities then available. This places a major emphasis on preemergency preparations and stockpiling to an extent not yet provided for. The radiological hazards of the postattack environment dictate that an adequate radiological defense capability be provided now.

Federal Aviation Agency mobilization activities during fiscal year 1959, to the extent that resources were available for this purpose, were directed toward insuring continuity of essential wartime functions within such an environment and have contributed materially toward the achievement of the objectives set forth in the declaration of policy in the Defense Production Act of 1950, as amended.

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## AIR COORDINATING COMMITTEE

AIR COORDINATING COMMITTEE,
*Washington, D.C., September 15, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*House of Representatives, Washington, D.C.*

MY DEAR MR. BROWN: In accordance with your letter of August 10, 1959, there is given below a summary of the Air Coordinating Committee's recommendations during the past year with respect to its participation in developing a complete program to meet civil aviation requirements under the Defense Production Act.

1. The Air Coordinating Committee coordinated four quarterly civil aviation programs related to priorities and allocations of controlled materials required for the production of civil air-carrier aircraft.

2. The Air Coordinating Committee participates in defense production activities pursuant to its responsibilities conferred by Executive Order No. 10655, January 28, 1956, as amended by Executive Order No. 10796, December 24, 1958. Under this Executive order, the Committee is authorized to "examine aviation problems and developments affecting more than one participating agency; develop and recommend integrated policies to be carried out and actions to be taken by the participating agencies, or by any other Government agency charged with responsibility in the aviation field; and, to the extent permitted by law, coordinate the aviation activities of such agencies except activities relating to the exercise of quasi-judicial functions."

3. The Committee approved and recommended four quarterly programs (C–33 to C–36, inclusive) to the joint aeronautical materials activity of the Department of Defense as a basis for the allocation of controlled materials to aircraft manufacturers to meet the civil requirements as established. These programs provided for the start of production of 228 new air-carrier aircraft during the year. The fourth quarterly program (C–36) provides for the start of production of 31 new carrier-type aircraft. In addition, the program recommends the allocation of controlled materials for 503 aircraft now under construction which were approved in prior programs.

This program coordinated the civil requirements as presented by the Federal Aviation Agency with other designated claimant agencies as follows: Departments of State, Army, Navy, Air Force, Commerce, and the Civil Aeronautics Board.

4. The recommendations of the Committee are implemented by the joint aeronautical materials activity of the Department of Defense which allocates controlled materials as required to the manufacturers included in the air-carrier program.

5. The extension of the Defense Production Act of 1950, as amended, extended controls for the maintenance of military production. Therefore, continuation of the established policy of the Committee for civil air-carrier type aircraft to be produced on an equal priority with similar military type is necessary in order to maintain air-carrier operations essential to the civil economy and, in addition, to provide an airlift potential in support of mobilization planning.

6. The noncarrier aircraft production program (industrial, business, and agricultural) under the defense materials system, effective July 1, 1953, is no longer eligible for allocation of controlled materials due to the easing of certain materials' shortages. Nevertheless, the production of this important segment of the aircraft industry, representative of small business, should be considered in evaluating the overall civil aircraft production essential to the defense effort. The manufacturers of noncarrier aircraft have submitted their production program covering the next 30-month period from October 1959 through March 1962, as follows:

| | |
|---|---|
| 4th quarter, 1959 | 2,455 |
| 4 quarters, 1960 | 9,844 |
| 4 quarters, 1961 | 10,168 |
| 1st quarter, 1962 | 2,738 |

7. There are no major problems with regard to coordination under the Defense Production Act.

8 and 9. The Air Coordinating Committee, in furtherance of its policy of equal priority for the production of similar civil-military type aircraft, will continue its coordination and development of programs to meet civil aviation requirements, both foreign and domestic, which are found to be essential to the civil economy and in support of the defense effort for any future emergency.

10. Certain rulemaking functions of the Committee's Airspace Division were transferred to the Federal Aviation Agency in accordance with the provisions of the Federal Aviation Act of 1958.

11. See item 14 below.

12. The availability of funds is not essential to carry out the Committee's recommendations with regard to equality of priorities for the production of civil air-carrier type aircraft.

13. See item 5 above.

14 The Air Coordinating Committee is prepared to consider any other problems that may arise requiring coordination or development of integrated policies pursuant to its responsibilities under Executive Order No. 10655, January 28, 1956, as amended by Executive Order No. 10796, December 24, 1958.

It is believed that the foregoing information and comments adequately cover the activities of the Air Coordinating Committee with respect to the Defense Production Act during the past year.

I trust this information is satisfactory for your purpose in preparing your report for the House of Representatives and the Senate. If the Committee can be of further assistance, please let me know.

If further information is desired, Mr. Robert R. Reining may be contacted on code 112, extension 2937.

Sincerely yours,

E. R. QUESADA, *Chairman.*

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## CIVIL AERONAUTICS BOARD

CIVIL AERONAUTICS BOARD,
*Washington, September 18, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Congress of the United States, Washington, D.C.*

DEAR CONGRESSMAN BROWN: In accordance with your letter of August 10, 1959, requesting a factual summary of the mobilization activities of the Civil Aeronautics Board for the past year, we are submitting the enclosed report.

If the committee's staff has any questions in connection with this report, they may contact Mr. John W. Dregge, Chief, Routes Division, Bureau of Air Operations, code 128, extension 7835, or DU 2-7835.

Sincerely yours,

JAMES R. DURFEE, *Chairman.*

*1. Mobilization programs conducted by the Civil Aeronautics Board*

(*a*) The Civil Aeronautics Board in conjunction with the Industry Advisory Committee on Aviation Mobilization is engaged in a continuing program of formulating plans and programs for, initiating actions, and carrying out such distribution and redistribution of civil aircraft among the civil air carriers as may be necessary to assure the maintenance of essential civil routes and services after allocation of aircraft has been made to the Department of Defense.

(*b*) The Civil Aeronautics Board, through its staff, has actively participated with OCDM and other governmental agencies, in mobilization planning and Operation Alerts conducted by OCDM.

(*c*) The Civil Aeronautics Board has urged civil air carriers to establish relocation points for their operations and maintenance in the event of an all-out emergency.

(*d*) The Civil Aeronautics Board has issued a standby order covering operations of civil air carriers upon the establishment of a national emergency.

*2. The authority from which the Civil Aeronautics Board derives its powers for such programs*

Executive Order 10480, August 18, 1953, transferred the emergency powers over air transportation from the Defense Production Administration to the Director, Office of Defense Mobilization. Defense Mobilization Order 1-7, September 4, 1953, redelegated these emergency powers pertaining to air transportation to the Secretary of Commerce. It is in accordance with Executive Orders 10219 and 10480 that the Secretary of Commerce has issued Department order No. 139 (revised) redelegating part of his authority to the Chairman of the Civil Aeronautics Board.

Authority for other programs noted above is derived from the Federal Aviation Act of 1958.

*3. Summary of each program*

(*a*) The Chairman of the Civil Aeronautics Board in exercising the delegation of power covering distribution and redistribution of civil aircraft, has appointed an Industry Advisory Committee on Aviation Mobilization to assist in formulating plans and programs for such activities. This industry mobilization committee is under the chairmanship of the Director of the Bureau of Air Operations, Civil Aeronautics Board. Governmental representatives act as chairmen of three task groups which have been formed within this committee. The duties of the three task groups are as follows:

*Task Group 1.*—Development of an estimate of wartime air transport requirements as a planning tool not only for use of the Board but also for use of the Defense Air Transport Administration and Office of Civil and Defense Mobilization in evaluating civilian versus military need for airlift in connection with requests for allocations to the Civil Reserve Air Fleet.

*Task Group 2.*—Determination of the method of allocating airlift between carriers to implement the war air service pattern including the assurance of provision of adequate personnel and maintenance facilities.

*Task Group 3.*—Development of financial and legal machinery for transfer of airlift between carriers under the war air service pattern.

Task Group 2 has developed the principles that will be established for the distribution and redistribution of aircraft during an emergency. These principles have been approved by the parent committee and accepted by the Board.

Task Group 1 has currently concluded an updating of the estimate of wartime air transport requirements.

Task Group 3 has developed a memorandum of agreement governing the distribution and redistribution of airlift during an emergency for use by the carriers in effectuating such action.

A meeting of the parent committee, the Industry Advisory Committee on Aviation Mobilization, will be held on September 22, 1959, to discuss and approve, if possible, the current reports of Task Group 1 and Task Group 3. Upon approval by the Industry Committee, they will be submitted to the Board for the Board's acceptance.

(*b*) Participation by Board staff in Operation Alert programs has consisted of staff attendance at relocation sites and developing of criteria for maintenance of the war air service pattern program during a national emergency.

(*c*) Letters have been sent to all certificated air carriers urging consideration of the establishment of a relocation point to assure continuation of operations in the event of damage to airline headquarters' facilities during an attack.

(*d*) A standby order has been issued to all certificated air carriers giving utmost flexibility of operation during the initial attack phase until evaluation of damage and communications can be established between the airlines and the Civil Aeronautics Board or the agency controlling transportation.

*4. A summary of the effectiveness of the programs*

(*a*) The effectiveness of the distribution and redistribution of aircraft programs has been impaired to some extent by lack of clarity as to the Board's responsibilities for maintenance of the so-called war air service pattern. Direct delegation to the Chairman or the Board would assist greatly in clearing up this problem.

(*b*) The same difficulty has existed with regard to the Board's activities in Operation Alerts in that the Civil Aeronautics Board is placed in a subordinate position to other similar agencies. Negotiations are in progress at the present time to attempt to correct this situation.

(*c*) Efforts to have certificated air carriers establish relocation points have met with moderate success. The cost to the individual air carrier of such action would be considerable. However, replies have been received from many of the airlines indicating a realization of the problem and some action has been noted.

(*d*) A copy of the standby order is attached to this report. It is believed that this would be most effective in the event of an emergency.

*5. Current need for the programs*

It is believed that continuing effort must be put forth to keep all programs current and in readiness in the event of an emergency. The Board is currently engaged in updating all programs and reviewing its responsibilities to meet the changing situation.

*6. Summary of the programs as related to small business*

Essentially there are no small business implications in the air transport industry unless the local service, territorial, and supplemental airlines could be considered as such. These carriers are an integral part of Board planning in the event of an emergency and would be utilized to the fullest possible extent.

*7. Major problems which now confront the Civil Aeronautics Board in carrying out the mobilization programs*

It would be most desirable to have clarification of the role that the Civil Aeronautics Board and its staff would play in an emergency situation. Lack

of more specific delineation of the duties and responsibilities of the CAB during an emergency has hampered the efforts of the Board and its staff to develop adequate mobilization planning.

*8. Changes in mobilization planning and readiness measures to meet future emergencies*

Direct delegation of power by Executive order to the Chairman of the Civil Aeronautics Board or to the Board itself as an entity for definite responsibilities during an emergency situation will clarify and effect better utilization of the Board and its staff's expertise in maintaining a war air service pattern during an emergency. In spite of the lack of clarity as to the Board's functions during such a situation, the Board and its staff have developed standards for a war air service pattern that could be put into effect by the Board immediately upon the development of an emergency.

*9. Summary of any standby program for any future emergency*

The keynote of any program concerning civil air transportation during an emergency, by the very nature of the operations of the industry, must be flexibility of operation. The Board, in its programing for future emergency operations, has given the utmost importance to the establishment of this flexibility of operation. It appears from the Board's evaluation that sufficient airlift will be available to carry priority passenger traffic, although on the basis of current estimates there may be a deficiency in cargo lift. Current efforts are being made to eliminate the deficiency in cargo airlift.

*10. Changes in organization during the past year*

There have been no changes.

*11. Future objectives*

As noted above, it would be desirable to have a direct delegation from the Executive to the CAB defining its duties and responsibilities during an emergency.

*12. Availability of funds for defense needs*

No funds have been officially provided for mobilization planning.

*13. A description of the manner in which mobilization programs fit into the defense plan and the objectives to be achieved*

Effective coordination and cooperation has been established with the Office of Defense Mobilization. The overall planning of the CAB fits into the defense plan coordinating all transportation. The objectives to be achieved have been cited in above paragraphs.

*14. Such other information as may appear pertinent in summarizing mobilization activities for the past year*

The CAB, commensurate with the limited staff available, continues to review mobilization planning and keeps close coordination with the Office of Civil and Defense Mobilization. It will continue its efforts to provide a war air service program that will meet the needs of the country to the greatest extent possible during an emergency.

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UNITED STATES OF AMERICA, CIVIL AERONAUTICS BOARD, WASHINGTON, D.C.

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 23d day of December 1958

IN THE MATTER OF CERTIFICATED AIR CARRIER EMERGENCY OPERATING AUTHORIZATIONS

STANDBY ORDER GRANTING TEMPORARY EXEMPTION

As part of the national mobilization effort, the Board has concluded that grant of certain flexible operating authority to certificated air carriers during a national emergency is necessary in order to automatically facilitate continued civil air transport operations with the highest degree of flexibility following

an attack upon the continental United States or the future declaration of a national emergency by the President.[1]

It is the Board's intention that during the initial emergency period before a war air service pattern can be put into effect each certificated carrier be permitted to operate between any points between which it is authorized by a certificate of public convenience and necessity to engage in air transportation, without regard to the terms, conditions and limitations set forth in such certificate. It is not the Board's intention to permit any carrier to operate without regard to the linear route descriptions set forth in its certificates, thereby making possible direct services between points on different routes, or on different segments of the same route, that the carrier has never been authorized to render and cannot provide under its certificated route structure. However, it must be recognized that unless some authority is granted to overfly route segment junction points, the inability of a carrier to serve a particular junction point due to airport damage or similar conditions would preclude the operation of flights over a combination of two or more routes or route segments which the carrier is now conducting via the junction point and which may be required in the interests of national defense. In order to assure the needed flexibility, but at the same time to preserve the basic route structure of the various carriers we will permit each certificated carrier to operate between any points between which it is authorized by its certificate to engage in air transportation, without regard to the terms, conditions, and limitations of such certificate, and to temporarily suspend service at a point or points as circumstances may warrant. We will further permit such carriers, on flights between points on different routes, or on different segments of the same route, to overfly any route junction point which cannot be served: *Provided*, That flights which overfly a junction point under this authority shall stop at the nearest certificated point short of, or beyond the route junction point. We believe the emergency operating authorization should also permit carriers to provide service to certificated points through any available nearby airport without the necessity of complying with the established airport notice filing procedures.

The Board finds that this expanded authority will be necessary during the initial period following an attack or national emergency in order that the air carriers may make the services they are able to provide available on the basis which will best meet the emergency air service demands.

Even though the Board by its action herein, intends to facilitate the provision of necessary civil air transport services on a liberalized basis during the initial stage of any national emergency which may arise, the carriers' overall obligations to provide the services authorized by their certificates will continue, and they will be expected to provide as full a pattern of service consonant with certificate obligations and limitations as is possible under prevailing conditions. It will be the Board's intention to evaluate all factors, such as damage to aircraft and airfields, and priority traffic demands immediately following an attack and to implement a war air service pattern as promptly as possible. The authority granted herein will be terminated or modified by the Board, or other appropriate authority as soon as an adequate war air service pattern is put into operation.

Upon consideration of the foregoing, the Board finds that enforcement of section 401 of the Civil Aeronautics Act of 1938, as amended, and of the provisions of the Board's economic regulations described below, insofar as they would prohibit provision of the air service authorized herein, would be an undue burden on the air carriers by reason of the limited extent of, or unusual circumstances affecting, their operations and would not be in the public interest.

ACCORDINGLY, IT IS ORDERED:

1. That all U.S. certificated air carriers be and they hereby are exempted from the provisions of section 401 of the act and the terms, conditions and limitations of their certificates to the extent necessary to permit such carriers to engage in air transportation, with respect to the classes of traffic named in their respective certificates, between any points between which they are authorized to engage in air transportation without regard to the terms, conditions, and limitations set forth in such certificates;

2. That all U.S. certificated air carriers be and they hereby are exempted from the provisions of section 401 of the act to the extent necessary to permit them

[1] The expanded authority contemplated herein need not be extended to supplemental air carriers or to air taxi operators because their relatively unrestricted present authorizations appear adequate to meet any emergency demands for their service.

on flights between points on different routes, or on different segments of the same route, to overfly any route segment junction point which, due to airport damage or similar conditions, cannot be served: *Provided*, That any flight which overflies a route junction point pursuant to this authority shall stop at the nearest certificated point short of or beyond such route junction point at which service is possible;

3. That all U.S. certificated air carriers be and they hereby are exempted from the provisions of parts 202.3, 202.4, 202.6, 203.2, 203.3, 203.4, 203.5, 205, and 207 of the Board's economic regulations;

4. That the authority granted in ordering paragraphs (1), (2), and (3) above shall come into effect upon an attack on the continental United States or the future declaration of a national emergency by the President, or by formal order of the Board and shall continue in effect until further order by the Board, or by other appropriate authority;

5. That this order may be modified or revoked at any time without notice or hearing.

By the Civil Aeronautics Board:

[SEAL] MABEL MCCART, *Acting Secretary*.

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## INTERIOR DEPARTMENT

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
*Washington, D.C., Oct. 16, 1959.*

HON. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Congress of the United States, Washington, D.C.*

DEAR MR. BROWN: We are pleased to submit with this letter, in response to your request of August 10, 1959, a summary of the defense mobilization activities of the Department of the Interior during the last year for inclusion in the Ninth Annual Report of the Joint Committee on Defense Production to the Congress.

We appreciate the opportunity accorded to us to extend the period covered by our report through September 1959, and particularly since this permitted the assembly and inclusion of statistical data through August 1959 on the minerals exploration program under contracts of the former Defense Minerals Exploration Administration. Thus the figures included in the report on the liquidation of this program tie into those in the Committee's eighth annual report which accounted for operations through August 31, 1958.

As you know, the delegations of authority and assignments of defense mobilization functions to this Department under the Defense Production Act, and related legislation, pertain principally to electric power, petroleum and gas, minerals, solid fuels minerals exploration, and fish and fishery products.

Our report is arranged in several sections, one on each of these areas of responsibility appearing in the order named, except that minerals and solid fuels are covered in a single section since programs related to both are carried on by the Office of Minerals Mobilization.

At the close of the report, we have included as appendix A a report entitled "Status of Studies and Research on Light Metals", consisting a brief summaries prepared by the Bureau of Mines and the Geological Survey concerning their respective activities on such metals during the last year and the status of projects at the close of September 1959. This special report is submitted in response to the suggestion in your letter that such an item be included in our report on the Department's activities. Like many other aspects of the work of the regular bureaus of the Department, such studies and research may contribute to the resource base upon which the United States would rely in a national defense emergency. Their objectives are by no means confined to their possible contributions to national defense, however, and the legislative authorities involved are not the same as those from which our defense mobilization functions derive, except in one instance. A part of the Bureau of Mines' research on titanium is sponsored by General Services Administration and financed by transfer of Defense Production Act funds.

Assignments of defense mobilization functions within the Department have remained unchanged during the year. The following offices administer these functions with respect to the products indicated: Office of Assistant Secretary—Water and Power Development (electric power); Office of Oil and Gas

(petroleum and gas); Office of Minerals Mobilization (metals and minerals, except domestic minerals exploration, and solid fuels); Office of Minerals Exploration (minerals exploration program under authority of the Defense Production Act); and the Commissioner of Fish and Wildlife (fish and fishery products). The Assistant to the Secretary (Defense Activities) provides a focal point for coordination of the Department's defense functions and programs.

In our report a year ago, we mentioned that a program for the training of selected personnel of the Department as instructors in radiological monitoring had been instituted during the fall of 1957 and that, up to that time, approximately 68 employees had been trained as instructors. This program has continued during the last year, and the instructors developed have in turn been conducting courses to train radiological monitors and, in some instances, additional radiological monitoring instructors. As a result, the Department has among its employees as of August 31, 1959, approximately 169 persons qualified as instructors and, in addition, about 473 trained as radiological monitors.

So we now have approximately 642 employees capable of monitoring radioactive fallout in event of an emergency calling for such service. Their distribution, by OCDM region, is as follows: Region 1, 7; region 2, 35; region 3, 35; region 4, 34; region 5, 113; region 6, 117; region 7, 154; and region 8, 147. As following sections of the report indicate, a teaching team composed of persons in our organizational units having industrial mobilization responsibilities has conducted for the training of industrial personnel as instructors in radiological monitoring. We believe that this whole program for the training of radiological monitors is an important readiness measure.

During the last year, considerable staff effort was devoted to further development of documents setting forth defense emergency plans and procedures. In March 1959, a revised edition of the Department's Emergency Operations Handbook was issued. It is designed to provide to managers and supervisors throughout the Department, and to employees generally, information and guidelines on their responsibilities and on the role of the Department and each of the bureaus in planning for and operations during a civil defense emergency. We also participated in a review of OCDM's Plan D Minus.

In addition, major work has been done in drafting annex 33 (National Energy and Minerals Plan) to be issued by the Office of Civil and Defense Mobilization as an annex to its National Plan for Civil Defense and Defense Mobilization, published in October 1958. Also, the Department has contributed to the preparation of other annexes to the national plan where we have related interests or responsibilities, as in the case of water and rural fire defense for example, and we have reviewed drafts of all annexes as they are submitted by OCDM for comment.

We have continued to maintain representation on a number of interdepartmental boards and committees associated with defense mobilization activities, to maintain our relocation site in readiness, and to develope the program for the enrollment and training of our executive reserve composed of personnel presently employed in industries within our purview.

Funds available for conduct of the defense mobilization functions of this Department during the current fiscal year are adequate to maintain, but not to expand significantly, last year's level of activities.

The last year has, we believe, been one marked by moderate progress in the firming of mobilization plans and in attainment of a greater degree of readiness to meet, in any national defense emergency, needs for the resources to which this Department's defense mobilization responsibilities relate.

Sincerely yours,

ROYCE A. HARDY,
*Acting Secretary of the Interior.*

## ELECTRIC POWER

### PROGRAM

The defense electric power program consists essentially of the development of preparedness measures designed to provide an adequate electric power supply (including generation, transmission, distribution, and utilization thereof) for the Nation under mobilization conditions.

Under Office of Civil and Defense Mobilization delegations, Interior has numerous responsibilities including: Planning a national program, providing technical guidance to the States; directing Federal activities concerned with

emergency restoration of electric service to attacked areas and provision of adequate electric utility service to support areas; providing guidance and leadership to the power industry in the development of plans and programs to insure the continuity of electric power production for essential uses in event of attack; developing and maintaining programs for operation of electric utilities under mobilization conditions; assembling and evaluating data as to the production capacity of electric utilities; analyzing the problems involved in maintaining adequate reserve capacity and recommending necessary programs; assembling data on requirements for electric power; developing and assembling data as to materials, equipment, transportation, and other resources required for the electric power industry under mobilization conditions; and cooperating with appropriate agencies in planning production and distribution controls, and advising with respect to orders, regulations, and directives as they may affect the electric power industry.

### AUTHORITY

The administration of defense functions pertaining to electric power is vested in the Secretary of the Interior under the Defense Production Act of 1950, as amended; Executive Order 10480 of August 15, 1953, as amended; Office of Defense Mobilization Order I–13 of November 12, 1954; DMO–I–7 (formerly DMO–30) of August 14, 1953; DMO VII–5 of October 7, 1953; Federal Civil Defense Administration delegations 3 and 4, as approved by the President on August 13, 1955, and November 22, 1955, respectively; and interim directive No. 2 of the Office of Defense and Civilian Mobilization dated July 1, 1958.

The assignment of responsibility within the Department of the Interior with respect to these funtions is set forth in order No. 2833 of the Secretary of the Interior, dated September 22, 1958 (23 F.R. 7554). Order No. 2833 continues unchanged the provision for defense electric power functions in the superseded orders No. 2822 (dated July 11, 1957), No. 2781 (January 6, 1955), No. 2764 (June 29, 1954), No. 2755 (April 23, 1954), and No. 2726 (June 30, 1953).

### SUMMARY OF PROGRAM ACTIVITIES

In carrying out the electric power delegations of the Office of Civil and Defense Mobilization to the Secretary of the Interior, the activities reported below have been conducted.

*Field organization*

Progress has been made with respect to a field organization to handle directly certain types of immediate post-attack problems, such as an emergency service for human survival and early restoration of essential power facilities. To assure that electric service will be available where most needed during such a period, reliance is placed on a field organization. Sixteen power areas have been established. These areas compare with the pool areas within which groups of interconnected utilities operate. Heading each area will be a director with a deputy and an alternate.

In event of attack, the area director will have to direct and curtail energy flows; assign priorities for use of materials and equipment; work with other area directors in making interarea transfers of energy, equipment and supplies; and requisition and allocate material supplies in the inventories of utilities in his area. In event the area director is incapacitated, his work will be carried on by an alternate from a different location within the area. Delegation of authority to area directors and in turn to their alternates will be made so that they can carry out a whole range of emergency actions on their own and without central agency direction, should that prove necessary.

Fifteen area directors have accepted and 13 have been appointed. Twelve deputy directors, six alternate directors, and three power utilization consultants have accepted and been appointed. Thus, of the 64 persons required to head the field organization, 36 have been selected and 34 have been appointed. As qualified persons are selected and security clearances obtained for each, the remaining 28 appointments will be made. These selectees will all be qualified men from the electric power industry.

The area directors are actively engaged in setting up their area organization. The 16 field organizations will be composed of some 2,500 to 3,000 utility personnel. A close relationship must be maintained between all electric utilities and all levels of civil defense. As a part of the area organization,

power liaison is to be established at every city, county, State, and regional civil defense office. Each power liaison representative will be from the utility serving the area in which the civil defense office is located. This relationship is as important for support areas as for attacked areas since support areas may well become primary energy sources. Through the power liaison, civil defense officials will be aware of the status of electric power in the event of an attack and the utilities will be informed of civil defense actions that may affect them. Also, the area director will have in each major utility a contact man. This man would normally be responsible for restoration of service.

*Emergency operations handbook*

An Emergency Operations Handbook has been completed in draft form. It sets forth the plan of organization and operating guidelines for a Defense Electric Power Administration under conditions of a national emergency. These items are outlined to the extent that presently can be anticipated and to the degree that would assist in making the initial decisions for establishing a defense electric power organization to carry out essential defense functions. The handbook, designed as a technical manual primarily for use by personnel in the electric power industry, is divided into three parts: Part I—"Introduction," which presents background information; Part II—"Defense Electric Power Administration" which contains procedures to be followed after an attack; and Part III—"Preattack Responsibility" which suggests necessary preattack actions to get ready and stay ready to take the actions described in part II. The handbook has been distributed for comments. When revised and published it will be distributed to the area directors and all utilities.

*The national plan*

Following the issuance of the National Plan for Civil Defense and Defense Mobilization by OCDM in October 1959, and at OCDM's request, the initial drafting of the part of annex 33 to this plan which will deal particularly with electric power, was done by Interior's staff. Subsequently, annex 33 was discussed in a number of conferences with OCDM's staff, and a revised draft has been circulated for formal interagency comment. As the period covered by this report draws to a close, OCDM is reviewing comments concerning this annex, including those submitted by this Department.

*Essential survival items*

The Inter-Agency Committee on Essential Survival Items, established by OCDM, agreed on a list of power items considered necessary for national survival in a post-attack situation. The list contains such items as line materials, transformers, tools, and trucks. The material and equipment would be needed for the repair and construction of facilities for transmission and distribution of essential power for survival and restoration requirements in a post-attack period.

OCDM has requested Interior to supply information as to usages and normal inventories by locations of these items. Questionnaire forms have been sent to 937 utilities, of which 838 have replied and followup requests have been sent to the remaining 99. Most of some 3,000 forms returned have been edited. The information obtained will be given to OCDM for National Damage Assessment Center uses. Also, the information will be of considerable value to Interior in its defense electric power mobilization planning.

*Data for damage assessment*

Preparedness for damage assessment in the event of an enemy attack requires the assembling of comprehensive data on electric generating plants and substations. In 1954 data on some 500 generating stations with capabilities of 50,000 kilowatt and over and 1,700 substations with transformer ratings of 25,000 kilovolt-ampere and over, were obtained from utilities and industries. The data obtained was furnished to the National Damage Assessment Center. To broaden the coverage, a new questionnaire was sent to 341 utilities and 214 industrial companies which operate all of the generating stations of over 10,000 kilowatt capacity within the United States. Replies have been received from 523. The some 1,200 generating stations covered embrace approximately 96 percent of the total capacity within the Nation. Also covered are the generating stations and substations which have gone into service since the last survey and any changes in capacity ratings which have occurred. The information obtained includes the type of construction which in turn will be used to determine the plant vulnerability to blast. The information will be furnished to the National Damage Assessment Center. Also, it will be most valuable to defense electric power central and regional offices in their mobilization planning.

*Radiological monitoring instructions*

A program has been in operation to train electric power industry personnel as instructors in radiological monitoring. Radiological defense will be an important function in providing for continuity of electric service in the event of a nuclear attack on the United States. In addition to OCDM's program, Interior believes that each electric power system, due to large areas served, must have a substantial and widespread corps, well trained and equipped, to detect and measure radioactivity. This will be essential for the conservation of skilled manpower, so necessary for the operation of their remaining system and the restoration and continuity of service for human survival. A 32-hour course has been prepared. Instruments, training aids, and a source set have been obtained. Classes have been conducted in Little Rock, Ark.; Washington, D.C.; and Cincinnati, Ohio. These classes were attended by 45 persons from the electric power industry. These persons, in turn, will initiate 12-hour courses for the training of instrument operators within their own systems. The first return came in June when 67 employees from the Consumers Public Power District, the Nebraska public power system, and the Omaha Public Power District received monitor training courses by utility employees who were given their training by Interior.

*Meetings with industry*

The Department of the Interior's functions and activities with respect to electric power were presented to representatives of some 100 major utilities at a meeting held in Pittsburgh, Pa., and to some 20 major utilities at a meeting held in New Orleans, La. At various times during the year meetings held by representatives from the electric power industry at Johnstown, Philadelphia, and Wernersville, Pa.; Cincinnati, Columbus, and Dayton, Ohio; and Sturbridge, Mass., were attended by departmental personnel. Problems in connection with the establishment of field organizations throughout the Nation to function in the event of a national emergency in providing, to the extent possible, electric power for essential uses were discussed.

*Operation Alert 1959*

There was considerable activity in preparation of policies and procedures for electric power participation in the 1959 annual exercise. Interior prepared and through its area directors sent to some 550 utility systems a memorandum of instructions and guidance. The exercise consisted of local, State, regional, and national phases. For the local phase on May 8 and 9, each utility reported: (1) Estimated capability and loads at D Minus 1 Day, D+1 Day, D+30 Days, and D+90 Days; (2) New loads for the military, AEC, and relocated populations at D+30 and D+90; and (3) Excess or deficiency in available generating capability at D+1, D+30, and D+90.

All 16 defense electric power field areas participated. About 1,400 power liaison personnel from the industry were present at civil defense offices. Reporting forms were received from some 350 utilities. This participation in the alert represented 128,000 megawatts or 86 percent of the total generating capability in the Nation. Based on the reporting, the total power supply, requirements and surplus for the Nation as a whole on D Minus 1, D+30, and D+90 are estimated to have been:

[In megawatts]

| | D−1 | D+30 | D+90 |
|---|---|---|---|
| Power supply | 148,000 | 105,000 | 112,000 |
| Requirements | 120,000 | 58,000 | 73,000 |
| Surplus | 28,000 | 47,000 | 39,000 |

This exercise indicated, as have all past exercises, that the loss of load was greater than the loss of generating capacity, resulting in a large surplus during the survival period following a simulated attack. There would exist isolated spots without power which would need attention. During the restoration period, with resumption of production, the requirements would increase and the surplus generating capacity would disappear.

Liaison from the utilities participated in the State phase, June 4 and 5, and in the regional phase, July 8–10. Interior power personnel participated in the regional phase and later in the national phase, August 24–28.

*Capabilities, loads, and reserves*

The capability of the electric power systems in the United States exceeded 144 million kilowatts at the end of 1958, an increase of 10.2 percent for the year. The capability forecast for the end of 1962 is over 188 million kilowatts. The average annual increase for the past 10 years was 10.2 percent, equivalent to doubling in 7.1 years.

The peakload for the United States as a whole for December 1958 slightly exceeded 113 million kilowatts, an increase of 6.1 percent for the year. The peakload forecast for December 1962 is approximately 153 million kilowatts and represents an average annual increase for the 10-year period from December 1952 of 7.8 percent—equivalent to doubling in 9.2 years.

The estimated 1959 summer peak is nearly 122 million kilowatts, an 11.4 percent increase over the 1958 summer load. The forecast for the 1962 summer peak is slightly over 152 million kilowatts. It appears that the summer peakload, expressed as a percentage of the winter peakload for the same year, is increasing for the country as a whole from 96 percent in 1958 to 100 percent as forecast for 1962.

The gross reserves, expressed as a percentage of the load, now indicated for the United States as a whole in December vary from 27.1 percent in 1958 to 23.3 percent in 1962. In general, gross reserves are adequate on a national basis under median and adverse hydro conditions for both summer and winter peaks, except in the western division of the Pacific Northwest area. Here, the December peakload under adverse hydro conditions is estimated to be slightly in excess of the capability in 1959 and 1961, but for 1960 and 1962 it is estimated to be slightly less than the capability.

Summer and December peak capabilities, peakloads, and gross reserves as actually occurred in 1957 and 1958 and as forecast for the years 1959 through 1962, on the basis of median hydro conditions, are shown for the country as a whole in table 1.

TABLE 1

| Year | Capabilities (millions of kilowatts) | | Loads (millions of kilowatts) | | Reserves (percent of loads) | |
|---|---|---|---|---|---|---|
| | Summer | December | Summer | December | Summer | December |
| 1957 actual | 127.3 | 130.6 | 106.7 | 106.9 | 19.3 | 22.2 |
| 1958 actual | 137.4 | 144.2 | 109.2 | 113.4 | 25.9 | 27.1 |
| 1959 estimated | 154.0 | 158.7 | 121.6 | 124.5 | 26.6 | 27.5 |
| 1960 estimated | 165.2 | 169.6 | 131.5 | 134.1 | 25.6 | 26.4 |
| 1961 estimated | 177.2 | 180.8 | 142.0 | 143.9 | 24.8 | 25.6 |
| 1962 estimated | 185.7 | 188.8 | 152.4 | 153.1 | 21.9 | 23.3 |

Summer and December peak capabilities, peakloads, and gross reserves as forecast for the years 1959 through 1962, on the basis of adverse hydro conditions, are shown for the country as a whole in table 2.

TABLE 2

| Year | Capabilities (millions of kilowatts) | | Loads (millions of kilowatts) | | Reserves (percent of loads) | |
|---|---|---|---|---|---|---|
| | Summer | December | Summer | December | Summer | December |
| 1959 estimated | 152.3 | 155.8 | 121.6 | 124.5 | 25.5 | 25.1 |
| 1960 estimated | 163.5 | 166.6 | 131.5 | 134.1 | 24.3 | 24.2 |
| 1961 estimated | 175.4 | 177.7 | 142.0 | 143.9 | 23.5 | 23.4 |
| 1962 estimated | 183.8 | 185.4 | 152.4 | 153.1 | 20.6 | 21.1 |

#### EFFECTIVENESS OF THE PROGRAM

The effectiveness of the electric power program was again demonstrated by the cooperation and interest of the electric power industry during the 1959 Operation Alert exercise. The response by the industry indicated its awareness of the defense problem and its readiness and willingness to serve in a national emergency. During the exercise the utilities assigned some 1,400 of their personnel at an expense to industry of over $50,000. The alert brought to the attention of the power industry the seriousness of conditions which might confront it in the aftermath of an attack. "Fallout" generated many questions. Of particular interest were population movements, denial of access to portions of systems, and methods of handling repair and operations in contaminated areas.

At most of the regional meetings of operating personnel of the utilities held throughout the Nation, civil defense matters pertaining to electric power have been placed on the agenda and Defense Electric Power Staff members frequently have been invited to participate.

#### STANDBY PROGRAMS

In carrying out the present delegations with respect to electric power from the Office of Civil and Defense Mobilization to the Secretary of the Interior, continuing emphasis is being placed on completing the field organization throughout the Nation ready to function in the event of an attack in order to provide, to the extent possible, electric power for essential uses.

#### CURRENT NEED FOR THE PROGRAM

Electric power is one of the most important services to our mode of life. It is essential to the military, AEC, mass survival of the people after an attack, restoration of production, and sustained retaliation.

Much has been done in the establishment of the organization to handle electric power in the event of an emergency. Much needs to be done. Field visits to all power areas are necessary to: continually furnish guidance and advice as to the program; complete and have an efficient standby organization ever ready to spring into action when required; develop knowledge about power problems connected with survival and restoration activities; develop an understanding of the impact of fallout; train personnel to assess radioactivity; acquaint the industry as to methods of handling necessary repairs and operations in contaminated areas on calculated risk bases; and promote cooperative procedures between utilities and local civil defense offices.

#### SMALL BUSINESS

A great majority of the 3,600 utility systems in the United States fall into the small business category. In general, the 500 systems owned privately and the 200 owned by manufacturers comprise the larger utilities with most of the generating capacity while the 1,900 municipals and 1,000 cooperatives include the smaller systems. Inasmuch as the heaviest responsibility during an emergency will fall on systems which generate larger blocks of power, Interior until 1958 dealt mostly with the larger utilities in its planning. Since then, systems with small bocks of power and many of those having only transmission and distribution facilities have also been included.

### PETROLEUM AND GAS

#### PROGRAM

The objective of the civil defense and defense mobilization activities encompassed in the program relating to petroleum and gas is to assure, insofar as possible, an adequate supply of these products to meet essential needs in the event of increased international tension, limited war, or general war, including enemy attack upon the United States.

The broad range of functions assigned to the Secretary of the Interior in connection with this program, under the authority of the Defense Production Act of 1950, as amended, and certain related legislation, is presently summarized in the OCDM's Defense Mobilization Order I-13. In addition, there are closely allied planning responsibilities pertaining to fuel supply delegated to him under the Federal Civil Defense Act of 1950, as amended. Some of these functions

are being performed currently, while some of them would be operative only in a proclaimed emergency. As to the latter, maintenance of readiness to initiate operations speedily in case of need is a part of current activities.

Highlights of activities during the year ending in September 1959, with respect to petroleum and gas, along with indications of the progress and effectiveness of the program, are presented in a following section headed "Summary of Program Activities." These activities are associated principally with the work of the Office of Oil and Gas which assists the Secretary of the Interior and the Assistant Secretary—Mineral Resources in discharging civil defense and defense mobilization reponsibilities pertaining to petroleum and gas.

### AUTHORITY

The composition and functions of the Office of Oil and Gas are described in chapter 111.5 of the departmental manual. Authority for the OOG mobilization and civil defense functions is derived from:

The Defense Production Act of 1950, as amended (Public Law 85–471; 72 Stat. 241; 50 U.S.C. App. secs. 2061–2166);

Executive Order 10480, as amended (50 U.S.C. App. sec. 2153, note);

Executive Order 10660 (21 F.R. 1117);

Executive Order 10773 (23 F.R. 5061) as amended by Executive Order 10782 (23 F.R. 6971);

Defense Mobilization Order I–7, as amended (18 F.R. 5366, 6737, 19 F.R. 7348);

Defense Mobilization Order I–13 (19 F.R. 7348);

Defense Mobilization Order I–21 (21 F.R. 1269), (Revised 23 F.R. 3529);

Defense Mobilization Order VII–5, as amended (18 F.R. 6408, 19 F.R. 7349);

Order No. 2833 of the Secretary of the Interior dated September 22, 1958 (23 F.R. 7554), superseding Order No. 2822 (22 F.R. 5779);

NPA Delegation No. 9, February 26, 1951 (17 F.R. 1908), as continued by Business and Defense Services Administration Regulation No. 1 (18 F.R. 6337);

Defense Transport Administration Delegation No. 6, May 5, 1951 (16 F.R. 4149), as amended February 19, 1954 (19 F.R. 1071), and continued by Interstate Commerce Commission by Organization Order DTA 1, as amended June 27, 1955 (20 F.R. 4550);

Section 168 of the Internal Revenue Code of 1954;

Federal Civil Defense Delegation No. 3 dated August 13, 1955 (20 F.R. 5957);

Interim Directive No. 2 of the Office of Defense and Civilian Mobilization, dated July 1, 1958.

### SUMMARY OF PROGRAM ACTIVITIES

Important activities related to petroleum and gas carried on during the last year, and the progress which has been made in defense planning, are summarized below.

*Executive reserve and plans for handling petroleum and gas in an emergency*

The Office of Oil and Gas completed a detailed statement of the respective emergency responsibilities of Federal, State, and local governments, as well as industry itself, for the production, transportation, processing, storage and distribution of petroleum and gas. Measures by which these responsibilities would be carried out in a period of international tension, limited war, or general war are delineated. This plan is reflected in the draft of the petroleum and gas section of annex 33 to the OCDM's National Plan for Civil Defense and Defense Mobilization being reviewed by OCDM as the period covered by this report ends.

To carry out these emergency responsibilities, the Office of Oil and Gas also has developed a plan for operational direction and control of the petroleum and gas industries under emergency conditions. It provides for the establishment of a national agency and field offices in the eight OCDM regions, as well as in each State, to be activated in event of an emergency for performance of the functions outlined in the annex. In response to the request which Acting Secretary Elmer F. Bennett made to the National Petroleum Council on January 21, 1959, the council is reviewing the plan and assisting the Office of Oil and Gas to recruit staff for the emergency organization.

The council, through special committees appointed for the purpose, is furnishing the Department, as requested, the names and industry affiliation of three or more persons for each of the key positions in the emergency national and field organizations. Thus, the Department is obtaining a roster by OCDM regions of qualified personnel in industry from which Government may make its selections, contact the individuals, and conclude any necessary negotiations with them. The Department is not obligated to select any individual on any list submitted, nor is it confining choices of personnel to those whose names are included in the lists submitted by the council.

Personnel selected for the standby, emergency national and field organizations for petroleum and gas will become members of the national defense executive reserve of the Department of the Interior. Establishment and training of an executive reserve are authorized under section 710(e) of the Defense Production Act amendments of 1955. No particular obstacles to recruitment and orientation of a substantial number of industry men for the executive reserve are expected during the next year.

*North Atlantic Treaty Organization*

Technical advice and assistance was given to the NATO Petroleum Planning Committee during the year. As a member of the U.S. delegation, the Director of OOG attended committee meetings held in Paris, France, during January. An Assistant Director of the Office served as chairman of the working group which developed and carried on oil supply-demand and related studies that are essential in NATO defense planning and the preservation of petroleum security. This working group held meetings in Paris during October 1958 and April 1959.

*Voluntary agreement relating to foreign petroleum supply*

The voluntary agreement relating to foreign petroleum supply, as amended May 8, 1956, continues in effect. The Secretary of the Interior or the Assistant Secretary—mineral resources serves as administrator of the agreement which was established pursuant to the provisions of section 708 of the Defense Production Act of 1950, as amended.

The Foreign Petroleum Supply Committee, composed of senior officials of 16 American companies engaged in foreign petroleum operations, assists in accomplishing the objectives of the agreement. The Director of the Office of Oil and Gas is chairman of the committee.

When requested by the Department, the FPSC performs two principal functions: (*a*) It provides advice on how the Government may obtain information on worldwide petroleum operations, requirements and supplies of petroleum; and (*b*) It may consider and make recommendations to prevent, eliminate, or alleviate shortages of petroleum in friendly foreign nations when such shortages threaten to affect, or do affect adversely, the defense mobilization interests and programs of the United States.

Periodic reviews by the Department of the Interior of the situation concerning the operation of this voluntary agreement have been made to the Department of Justice. The Attorney General is required under the Defense Production Act of 1950, as amended, to review outstanding voluntary agreements and to report every 90 days to the President and the Congress the result of each survey. Continuation of the voluntary agreement has been approved by the Attorney General.

The Office of Oil and Gas has initiated action necessary to comply with a request, made July 15, 1959, by the Deputy Assistant Secretary of Defense (Supply and Logistics), for a report on petroleum refining capacity in friendly foreign nations. Such information is essential in long-range military planning. Since this type of report is no longer prepared for Government use by the Foreign Petroleum Supply Committee, the Office of Oil and Gas has been in consultation with members of the committee for advice in connection with the Department of Defense request.

*Industrial expansion goals and accelerated tax amortization*

Expansion in the petroleum and gas industries has been progressing at a rate considered adequate for the present mobilization plans. In view of this and also in view of the limitations on types of facilities eligible for accelerated tax amortization set by Public Law 85-165 enacted in August 1957, it is most unlikely that any facilities to be constructed by the petroleum and gas industries would qualify for certificates of necessity. No applications have been received since the enactment of Public Law 85-165, and none are anticipated. However, OCDM has continued to receive requests for postcertification actions on certificates issued by OCDM prior to enactment of Public Law 85-165, and

some have been referred to the Department for consideration. During the year, the Office of Oil and Gas forwarded departmental reports and recommendations to OCDM covering 19 requests for scope amendments and one request for time extension.

*Long-range petroleum study*

As the period covered by this report draws to a close, the background studies of U.S. supply capabilities and requirements of petroleum upon which to base a long-range national security policy are approaching the final stages of preparation within the Department of the Interior. The Office of Oil and Gas, under the leadership of the Assistant Director, is coordinating departmental activities in connection with this work in which the Geological Survey and Bureau of Mines are participating.

This study, undertaken at the request of OCDM, will include estimates of the U.S. petroleum situation in 1960, 1965, and 1975. Thus far, a section on petroleum reserves and productive capacity has been prepared by the Geological Survey, and the Bureau of Mines is completing certain projections of U.S. demand and of supply capabilities. The Office of Oil and Gas will incorporate information from these studies in a comprehensive summary report, subject to review by petroleum industry consultants and offices of other Government departments.

*Emergency port facility study*

During the first quarter of the calendar year 1959, a comprehensive plan for emergency tanker loading and discharge facilities was developed by the Office of Oil and Gas and submitted to the Department of Defense which had requested a study of this problem. This plan was subsequently distributed by the Department of Defense for comment by several agencies, and it is being reviewed currently by the Department of Defense and the Office of Civil and Defense Mobilization.

*Studies on transportation, refinery capacity, storage, and communications*

Valuable additions to basic data available for defense mobilization planning with respect to petroleum and gas have resulted from two studies made by the National Petroleum Council, as requested by the Department, which were presented and approved by the council at its meeting on January 27, 1959. One of these, entitled "Petroleum Transportation," presents data on capacities of petroleum pipelines (crude and product), barges and lake tankers, tank cars and tank trucks, and transportation facilities for liquified petroleum gas. (Tankers other than lake tankers were not included, since a separate, earlier study was devoted to them.) The other study, entitled "U.S. Refinery Capacity," shows refinery capacity by processes and by refining districts, as of March 31, 1957, and projections for July 1, 1958, and July 1, 1959, based on estimates by refiners.

Also at this meeting in January 1959 the National Petroleum Council agreed to undertake two studies requested by the Acting Secretary of the Interior—one, a current study of petroleum storage facilities in the United States and the other, a study of the use of radio and radar in the petroleum and gas industries. The latter will bring up to date an earlier study on communication facilities. When completed these studies will provide information which will be very useful in connection with defense mobilization planning. The one on storage facilities, particularly, will assist in evaluation of such facilities for postattack purposes under the OCDM's national supply-requirements analysis program with respect to survival items.

*Data for damage assessment*

In the spring of 1959, updated information on petroleum refining capacity was furnished to the National Damage Assessment Center for incorporation in its system. Data on locations and capacities of petroleum storage facilities to be obtained from the study mentioned in the immediately preceding paragraph will be used to supplement and improve the NDAC's present data on such facilities.

*Operation Alert 1959*

OCDM sponsored the sixth nationwide civil defense and mobilization exercise—Operation Alert 1959—to test the Nation's capabilities to withstand and survive a nuclear attack.

The Federal participant in the exercise responsible for petroleum and gas, the Office of Oil and Gas, engaged in extensive preparation. Studies were made of the pattern of bomb drops and fallout in a nuclear attack, damage to oil and gas facilities were analyzed, estimates of postattack supply and demand for oil and gas were developed, transportation requirements and manpower problems were considered, and related problems incident to disruption in petroleum and gas production and supply of products were identified.

The exercise commenced in mid-April and continued through the summer in progressive stages. The first phase, in April, was focused on public participation in the civil defense exercises held April 17 and 18.

Capabilities to cope with postattack problems at the local, State, and regional levels were tested in the three subsequent phases of the exercise: Local government tests, May 8 and 9; State, June 4 and 5; and regional, July 8, 9 and 10.

During the regional exercise, specialists from the oil and gas industries, recruited by the Office of Oil and Gas, provided technical advice and assistance at each of the eight OCDM regional headquarters. These industry experts, one gas and two petroleum for each region, were briefed by the Office of Oil and Gas and furnished essential data and instructions for their participation in the exercise.

An exercise for Washington headquarters staffs of Federal agencies took place August 24–28. Seven employees of the Office of Oil and Gas took part in this national level test conducted at the relocation site.

*Radiological monitoring*

Radiological monitoring of fallout caused by atomic explosions would, of course, be very important to the continuity of petroleum and gas industry operations in event of nuclear attack. Therefore, Office of Oil and Gas and petroleum and gas industry employees have completed a course in this subject, conducted by a departmental team. The course provides technical background required to enable individuals to teach others how to operate radiological instruments used in the detection and measurement of radioactivity. An employee of the Office of Oil and Gas is one of the instructors on the departmental team. It is anticipated that this training will be extended to include more government and industry personnel.

## Minerals and Solid Fuels

### PROGRAM

All defense mobilization and civil defense functions relating to metals and minerals and solid fuels delegated and assigned to the Secretary of the Interior, and not redelegated to agencies outside the Department, are included in the assignment of functions to the Office of Minerals Mobilization, except functions with respect to domestic exploration for metals and minerals under authority of the Defense Production Act. The functions pertaining to exploration are covered in another section of the Department's report.

The programs carried on by the Office of Minerals Mobilization during the last year, and being continued, are designed to achieve and maintain readiness of mineral and solid fuel resources, and the producing industries, to meet needs for these products in the event of increased international tension, limited war, or general war, including attack upon the United States. These programs are related to the preparedness measures specified in OCDM's Defense Mobilization Order I–13 concerning the assignment of defense mobilization responsibilities to the Secretary of the Interior, and also to the planning responsibility with respect to supply of solid fuels delegated to him by FCDA Delegation No. 3, continued in effect by the Office of Civil and Defense Mobilization.

The responsibilities, programs and activities of the Office of Minerals Mobilization can be divided into the following four principal categories:

(*1*) *Adequacy of supply under mobilization conditions*

OMM evaluates the extent to which production by the domestic minerals, metals and solid fuels industries, imports of minerals, and Government stocks of metals and minerals would be able to meet essential civilian and military requirements under mobilization conditions. These evaluations are the principal bases for periodic or special recommendations to the Secretary of the Interior and to the Office of Civil and Defense Mobilization with respect to Government assistance programs, including procurement, and the management

and maintenance of Government stocks of metals and minerals, insofar as such matters relate to supplies which would be needed under mobilization conditions and to support of an adequate domestic production component of the mobilization base.

(By Executive Order 10480, the Administrator of the General Services Administration has responsibility for purchasing and making commitments to purchase metals and minerals under the Defense Production Act. For this reason, the closely allied function of screening and making recommendations to ODM (now OCDM) on individual requests for loans, guarantees and accelerated tax amortization with respect to the aspects of production and processing of metals and minerals assigned to the Secretary of the Interior, was delegated to the Administrator of GSA by Interior Defense Delegation I (19 F.R. 9357) on December 22, 1954. While OMM conducts no operations in these areas, it furnishes to GSA such data and consultation as GSA may request. However, OMM continues to have the responsibility in these areas with respect to solid fuels.)

(2) *Continuity of industrial production under mobilization conditions*

OMM provides guidance to the minerals and solid fuels industries as to planning and programs which these industries should undertake to insure continuity of essential production under mobilization conditions, and particularly in event of enemy attack on the United States; develops, assembles, and evaluates data as to materials, equipment, transportation, manpower, and other resources which these industries would need under mobilization conditions; works with OCDM and other OCDM delegate agencies in developing procedures under which Interior would request allocation of such resources for these industries and, also, methods by which allotments to individual producers would be made; maintains data obtained from General Services Administration on quantities and locations of Government stocks of minerals, so that in event of an emergency calling for release of such stocks to mineral processing facilities within Interior's purview, OMM will be prepared to make prompt, specific recommendations to OCDM concerning releases which OCDM should direct GSA to effect; cooperates with the Industry Evaluation Board, chaired by the Department of Commerce, in identifying and rating essential facilities; participates in training instructors in radiological monitoring in the minerals and solid fuels industries; and maintains rosters of industry advisory committees in readiness for consultation.

The preparedness achieved by these programs is augmented by the awareness of mobilization problems gained by industrial personnel who serve as executive reservists. While the object of the executive reserve program is to assure readiness for staffing of Federal agencies in an emergency and therefore it is included among programs listed below under "Continuity of Government", the significant contribution which this program makes to progress in nongovernmental, as well as governmental, preparedness should be recognized.

(3) *Continuity of Government's capability to marshal mineral and solid fuel resources under mobilization conditions*

OMM enrolls personnel in the minerals and solid fuels industries to serve as members of the executive reserve, established under authority of the Defense Production Act, and trains these executive reservists for duties which they might be called upon to perform as Government employees in a national emergency; develops standby orders and regulations to govern the channeling of minerals and solid fuels to essential uses and to utilize available facilities most effectively under mobilization conditions; provides data on locations and capacities of minerals and solid fuels facilities to the National Damage Assessment Center, to permit rapid estimates of surviving capacity in event of attack; maintains a headquarters relocation center in readiness; develops plans for Government actions with respect to minerals and solid fuels under varying degrees of national emergency, and assists OCDM in fitting these into total, national plans; and participates in exercises sponsored by the Office of Civil and Defense Mobilization to test readiness of Government agencies to discharge their civil defense and defense mobilization functions in an emergency.

(4) *Planning for supply of solid fuels in event of attack*

In discharging Interior's responsibilities under FCDA Delegation No. 3, OMM plans actions which would be required, and develops readiness to carry on operations in event of a civil defense emergency, to procure, store, transport, and

distribute adequate supplies of solid fuels to attacked areas and reception centers, consistent with the national emergency fuel program.

The activities and progress of the Office of Minerals Mobilization in the four above-outlined program areas during the year covered by this report are set forth below under the heading "Summary of Program Activities."

### AUTHORITY

The Office of Minerals Mobilization was established by the Secretary of the Interior in January 1955. Secretary's order No. 2781, dated January 6, 1955 (20 F.R. 316), delegated to the Director of the Office of Minerals Mobilization certain functions under the Defense Production Act and related legislation with respect to solid fuels and metals and minerals, except domestic minerals exploration functions performed by the Defense Minerals Exploration Administration and certain operational functions delegated to the Administrator of General Services. These functions were delegated by the Secretary pursuant to delegation of authority and assignments made to the Secretary by the Director of the Office of Defense Mobilization in Defense Mobilization Orders I–7, as amended (18 F.R. 5366, 19 F.R. 7348), VII–5, as amended (18 F.R. 6408, 19 F.R. 7349), and I–13 (19 F.R. 7348). Under Federal Civil Defense Administration Delegation No. 3 (20 F.R. 5957), effective August 13, 1955, the Office of Minerals Mobilization is responsible for certain functions with respect to planning for distribution of solid fuels for civil defense purposes in the event of emergency. The delegations of authority to the Director of the Office of Minerals Mobilization initially set forth in Secretary's order No. 2781 have been continued in Secretary's orders Nos. 2822 (22 F.R. 5779) and 2833, dated September 22, 1958 (23 F.R. 7554). On July 1, 1958, the Director of the new Office of Defense and Civilian Mobilization (renamed on August 26, 1958, as the Office of Civil and Defense Mobilization) issued interim directive No. 2 continuing in effect all delegations and orders of the former ODM and FCDA.

The Office of Minerals Mobilization is a departmental unit, reporting to the Assistant Secretary—Mineral Resources. A description of its functions appears in chapter 111.4 of the departmental manual.

### SUMMARY OF PROGRAM ACTIVITIES

The activities and progress of the Office of Minerals Mobilization in the major program areas outlined above are described in the paragraphs which follow.

*Adequacy of supply under mobilization conditions*

As in the past, the Office of Minerals Mobilization has continued its surveillance of the supply-requirements position of minerals important to national defense. This involves consideration of the relationship of requirements to the current and potential levels of production at all sources, both domestic and foreign, the volume of imports and exports, the status of the national stockpile of strategic and critical materials and other Government stocks of such materials, the accessibility of sources under wartime conditions, the size and productivity of known reserves, and developments in technology which might affect mining, processing, or utilization of the subject mineral.

During the last year, there was an increasing demand for special studies, evaluations, and recommendations on specific policy and operational problems relating to minerals supply under mobilization conditions. These dealt with such matters as high-temperature and special property materials, imports and foreign trade, barter and the supplemental stockpile, and domestic production capacity.

*Comprehensive mobilization base evaluations.*—During the period covered by this report, comprehensive mobilization base evaluations were prepared on columbium-tantalum, tungsten, and copper. An earlier study of this type on fluorspar was reviewed. Previous studies on chrysotile asbestos and mica were reviewed in the light of new data on requirements from OCDM.

As a result of deliberations of the OCDM's Interdepartmental Materials Advisory Committee, on which the OMM represents the Department of the Interior, new requirements figures have been determined for a number of mineral commodities. These have been and will be used in OMM's comprehensive mobilization base evaluations and reviews.

*High-temperature and special property materials.*—Two revised evaluations were made for OCDM on high-temperature and special property materials. The original study on this subject, made at the request of the Chairman of OCDM's Special Stockpile Advisory Committee, was submitted to OCDM in November 1957. In response to a request from the Director of the former Office of Defense Mobilization to the Secretary of the Interior, dated June 30, 1958, reports on these materials are revised and brought up to date twice a year—in April and October. Copies are furnished to the staff of the Joint Committee on Defense Production as the reports are completed.

*Imports.*—At the request of OCDM in connection with its consideration of actions under section 8 of the Trade Agreements Extension Act of 1958, the Department's comments on the effect of imports of cobalt, fluorspar and tungsten on the national security were submitted. In determining the supply availability of these commodities to meet mobilization requirements as determined by OCDM, the various criteria set forth in OCDM regulation 4 were considered.

*Stockpiling.*—Problems relating to disposals of Government inventories of metals and minerals in excess of national defense requirements became increasingly important during the last several months.

The Office of Minerals Mobilization reviewed and commented upon disposal plans for excess Government inventories of metals and minerals which were formulated by the General Services Administration and referred to the Department for consideration. Plans covered the following materials: titanium sponge (in excess of 140 Brinell hardness), cadmium-magnesium scrap,graphite, quartz crystal (semifabricated), steatite talc (powered), and low grade chrome ore. The reviews consisted of evaluations of the supply-demand positions of these commodities and appraisal of the extent to which disposal might disrupt the usual markets of producers, processors, and consumers. In connection with a proposed disposal of a portion of the Government's excess copper inventories which OCDM was considering in the spring of 1959, the views of segments of the copper industry within Interior's purview as expressed to OMM were reported to OCDM for its consideration.

During the second quarter of the calendar year 1959, OMM checked the OCDM's list of materials authorized for disposal in the past year and in the case of those listed materials for which GSA had not yet submitted disposal plans, studied the possible impact which sales would have on the domestic market. A comparison of proposed rotation disposals with stockpile inventories and objectives was also compiled.

The OMM collaborated with the Bureau of Mines, Geological Survey and Office of Minerals Exploration in the preparation and submission, to OCDM, of information for inclusion in OCDM's unclassified stockpile reports to the Congress for the periods July 1 to December 31, 1958, and January 1 to June 30, 1959.

*Barter.*—On July 23, 1958, the Director of the Office of Minerals Mobilization was designated by the Secretary of the Interior to serve as the Department's representative on the Supplemental Stockpile Advisory Committee on Barter, and he has continued to serve in this capacity.

The Office of Minerals Mobilization has worked closely with OCDM and the Department of Agriculture on acquisition of materials for the strategic and supplemental stockpiles by barter for surplus agricultural commodities produced in the United States. The barter program, administered by the Department of Agriculture, is carried on principally under the authority of Public Law 480, 83d Congress (1954), as amended.

The aspect of the barter program which relates to OMM's defense mobilization functions stems from the provision of the act that one of the purposes for which agricultural surpluses may be bartered is the acquisition of materials of which the United States does not domestically produce its requirements, including strategic and critical materials, within the applicable terms of the Strategic and Critical Materials Stock Piling Act, for a supplemental U.S. stockpile of such materials. The act provides that the amounts so acquired may be additional to those acquired under authority of the Strategic and Critical Materials Stock Piling Act, and further, that materials so acquired shall be released from the supplemental stockpile only under the provisions of section 3 of the Strategic and Critical Materials Stock Piling Act. Thus, metals and minerals acquired for this supplemental stockpile become a component of the supply that could be made available in a defense emergency.

Among matters which the Supplemental Stockpiling Advisory Committee on Barter, and OMM as Interior's representative, consider with respect to various

materials are the following: (1) The materials to be designated by the President for acquisition and revisions in the Presidential listings, (2) the issuance of barter authorizations and adjustments in existing authorizations, (3) specifications on material for procurement, (4) market conditions and the effect on domestic producers and consumers, and (5) the relationship of proposed barter acquisitions to other components of supply of such materials in a defense emergency. The distinctive position of each of the several minerals considered has required OMM staff study on a case-by-case basis. For example, in the case of mercury, a proposal for barter plus concern for the future well-being of the domestic mercury industry led OMM to make a comprehensive study and report on the possible future for domestic production with respect to world prices, current world overproduction, the expected changes in world consumption and the effect of U.S. barter in supporting world prices.

Associated with OMM's work with the Supplemental Stockpile Advisory Committee on Barter is its representation of the Department on the Interagency Committee on the Use of Public Law 480 for Acquiring Survival Items. This latter Committee was established by OCDM in January, 1959. OMM attends meetings and participates in its activities in matters directly affecting the interests and programs of the Department of the Interior.

*Continuity of industrial production under mobilization conditions*

Several of the measures included under this category of program activities involve principally maintenance, periodic review and any needed revision of documents and records prepared in previous years. This applies to data on materials and other resources which would be needed by the minerals and solid fuels industries under mobilization conditions, data on quantities and locations of Government stocks of minerals, Industry Evaluation Board analyses, and rosters of industry advisor committees in readiness for consultation. OMM has made the necessary reviews and revisions during the last year. Activities with respect to two other features of this category of program activities related to continuity of industrial production under mobilization conditions are reported immediately below.

*Guidance to the minerals and solid fuels industries.*—At meetings during the last year with officials of the minerals industries serving as executive reservists of the Office of Minerals Mobilization, OMM staff members reviewed with them the steps which companies are encouraged to take in order to insure their capability to continue production under mobilization conditions. The basic steps are outlined in the OMM's brochure entitled "An Alert to the Minerals Industry" which was published and widely distributed to the minerals industries in May 1958. Since that time, OMM has continued to receive requests for copies of this brochure.

*Training of instructors in radiological monitoring.*—A member of the OMM staff, as a member of the Department's teaching team, conducted classes in radiological monitoring at Cincinnati, Little Rock, and Washington, D.C. A total of 61 students were trained to teach others in methods of radiological monitoring. The students included personnel from the Department of the Interior and personnel employed in the oil, gas, and electric power and solid fuels industries.

Personnel trained in radiological monitoring would be of invaluable assistance to industry in measuring the intensity of fallout after an attack. Monitoring is the only way in which it would be possible to tell when the radioactivity of fallout had decayed to the point where industrial production at plants not damaged by blast or fire could be resumed.

*Continuity of Government's capability to marshal mineral and solid fuel resources under mobilization conditions*

The emphasis in this category of program activities is on preparedness of the Office of Minerals Mobilization to discharge its functions promptly and effectively in event of increased international tension, limited war or general war, including attack upon the United States. This preparedness includes readiness to conduct operations with respect to certain functions of Government mentioned previously among programs in the "continuity of industrial production" category for which planning is now being done; it also embraces readiness to expand staff with personnel trained for emergency operations, to invoke any necessary orders and regulations with respect to minerals and solid fuels, and to operate under emergency conditions.

*National defense executive reserve.*—In order to be ready to staff headquarters and field organizations with trained personnel in an emergency, the Office of Minerals Mobilization is carrying on a program to enroll individuals presently associated with the minerals and solid fuels industries to serve as members of the national defense executive reserve of the Department of the Interior, and to acquaint them with the duties which they would be expected to perform as Government employees during an emergency. The establishment and training of an executive reserve are authorized under section 710(e) of the Defense Production Act of 1950, as amended. Appointments to the OMM unit of the executive reserve are made by the Secretary of the Interior upon recommendation by the Director of the Office of Minerals Mobilization.

The full complement of executive reservists presently contemplated by OMM, including those in both the minerals group and the solid fuels group, is 158. Of this number, 50 have been appointed. Nineteen of these are in the solid fuels group, composed entirely of executive reservists appointed as area distribution managers. Ten of the executive reservists were appointed during the last year, and efforts to enroll additional reservists are being continued.

OMM executive reservists in the minerals area were brought to headquarters for orientation in two groups, one in April and another in May 1959. They underwent thorough indoctrination through a series of lectures by key personnel of OCDM, Interior, and other Government agencies. These sessions presented to the reservists a realistic picture of Government action in a postattack situation.

In July, eight reservists in the minerals group participated in the regional phase of Operation Alert 1959, serving as minerals representatives of the Office of Minerals Mobilization at the eight OCDM regional offices.

*The national plan.*—A final draft of annex 33 to the national plan for civil defense and defense mobilization was being reviewed by OCDM in September 1959. One of the four parts of this annex pertains to solid fuels, and another to minerals. Staff members of the Office of Minerals Mobilization have devoted considerable time to the preparation of material for annex 33.

*Standby orders and regulations.*—Work was done on preparation of standby orders and regulations with respect to minerals in years past, and with respect to solid fuels in connection with the Operation Alerts in 1958 and 1959. However, when annex 33 and certain other annexes to the national plan for civil defense and defense mobilization are published in final form, it will be possible to prepare a more current and complete set of standby orders and regulations.

*Data for damage assessment.*—With respect to solid fuels, input data on beehive and byproduct coke facilities were completed and submitted to the National Damage Assessment Center, and assembly of similar data on the anthracite industry is nearing completion. OMM continued to assemble data on the bituminous coal and lignite industries for submission to the NDAC. Much of the information is available in the records of the Bureau of Mines; however, it was found necessary to send out a questionnaire to determine the precise location of the mining facilities and the size and type of construction of the various structures erected at each location. Returns now represent a coverage of nearly 80 percent of the production. An effort is being made to obtain responses from companies which have not yet submitted the required information. The accumulation of this information and assembling it in the form required as input data for the digital computer is a lengthy and involved process. Because of the limited size of the staff available for this project, it will be at least 9 to 12 months before the data will be ready for the computer.

With respect to minerals and metals facilities, input data on file at the National Damage Assessment Center were reviewed, augmented, and revised where necessary during the last year. Data on additional commodities were compiled for submission to the center after Operation Alert 1959, for inclusion in OMM data on file at that site. An integrated name and data listing for each of the eight OCDM regions has been prepared, including a narrative description of the coded data and a guide for interpreting the data. This material is used to instruct the executive reservists in the fundamentals of the damage assessment system.

*Testing of mobilization plans—Operation Alert 1959.*—Preparation for Operation Alert 1959, particularly the regional phase held in July, occupied a large portion of the time of the OMM staff during the last half of May and all of June.

Instructional material was sent to the eight executive reservists in the minerals area who served as OMM minerals representatives at the eight OCDM regional offices during the regional exercise, held on July 8, 9, and 10. This

group gained valuable, firsthand experience in the kinds of operations which might be required under postattack conditions.

Solid fuels were among the survival items chosen by OCDM for testing of resource management functions in Operation Alert 1959. Therefore, OMM worked out data on productive capacity for solid fuels and the supply-requirements balance in each region, for various classes of consumers. Estimates were made of available stocks at consumer facilities and at primary storage facilities such as lake, tidewater, and river dock facilities. From these figures, requirements for manpower and transportation were developed for certain times periods following the assumed attacked as specified by the OCDM standards for the exercise. These data were furnished to all OCDM regional offices for their use in making decisions concerning postattack management of interrelated resources under the conditions assumed in the exercise. Members of the solid fuels staff of OMM went to the regional headquarters of OCDM regions 1, 2, and 4, to observe operations in the regional phase of the exercise.

Members of the OMM's staff participated in the national phase of Operation Alert 1959, conducted at the relocation site during the period August 24–28.

*Planning for supply of solid fuels in event of attack*

The responsibilities assigned to the Office of Minerals Mobilization under FCDA Delegation No. 3 focus on a particular aspect of mobilization planning which is an inherent part of its broader responsibilities for solid fuels supply under other delegations and assignments. FCDA Delegation No. 3, issued under authority of the Federal Civil Defense Act of 1950, as amended, calls for planning of Federal activities designed to procure, store, transport, and distribute adequate fuel supplies (solid fuels, in the case of OMM) to attacked areas and reception centers, consistent with the national emergency fuel program. The object of planning is to assure readiness for actions necessary to provide adequate supplies of solid fuels for the designated purposes in event of a civil defense emergency.

Because of the joint responsibility of the Federal Government and the States for civil defense, the initial development by OMM of a national plan for the purposes outlined in FCDA Delegation No. 3 involved considerable contact with FCDA (now OCDM) regional offices and State officials. The overall plan is reflected in the draft of the solid fuels part of annex 33 to the national plan for civil defense and defense mobilization being reviewed by OCDM.

In order to integrate the national plan for solid fuels with State civil defense plans, the OMM has been engaged in executing memorandums of understanding with the State civil defense directors on the application of the national plan for solid fuels in each State.

Such agreements have been effected with 26 States and the District of Columbia, leaving the Commonwealth of Pennsylvania, where negotiations are now pending, as the only State in OCDM regions 1 through 4 where an agreement remains to be concluded.

No contacts have yet been established with any States in OCDM regions 5 to 8, west of the Mississippi River, concerning similar agreements. It is anticipated that work with certain States in those regions where solid fuels are a significant factor in supply of energy will be undertaken during the coming year.

## CURRENT NEED FOR THE PROGRAM

Nothing is more basic to the continuing economic and military strength of a highly industrialized nation such as the United States than adequate and assured supplies of metals and minerals, for the future as well as the present. Upon them depends the manufacture of a great array of products, including the machines and plants that make the goods, the electric power facilities that energize the plants, and the transportation equipment that moves workers and goods. Also, they are the base for production for a wide range of chemicals without which many essential products for military and civilian use could not be made.

The necessity for having adequate supplies of solid fuels has been amply demonstrated in past emergencies. They are required in vast quantities for the production of electric power, steel and other materials, including certain chemicals derived from coal, for the national defense. The mobilization base for coal and coke production must be adequate to fill not only the normal demand for coal for heating but also to provide coke for full-scale operation of the Nation's steelmaking capacity and to meet any additional heating fuel needs

which might arise from diversion of petroleum products to military operations. Coal would also be an important survival item in an immediate postattack period.

The Office of Minerals Mobilization exists to identify, recommend, and encourage Government and industry to take all steps necessary to assure the availability of enough metals and minerals and solid fuels to meet essential needs in a national defense emergency.

To help assure that these supplies will be available in such an emergency, the Office of Minerals Mobilization carries on the programs outlined in this report. As a result of expansions of supply since the Korean emergency, many of which were encouraged through financial aids provided under authority of the Defense Production Act, and also as a result of substantial additions to Government stockpiles of minerals since that time, the mobilization base for metals and minerals has been greatly strengthened. In the case of nearly all strategic and critical metals and minerals stockpiled by the Federal Government, the various components of mobilization supply are adequate for mobilization requirements as presently foreseen. In the case of a few of them, however, the maximum stockpile objectives have not yet been attained but progress toward these goals is being made.

Stockpiles, of course, represent only one of several components of the mobilization base for metals and minerals. The stockpile objectives established, which are subject to continuing review and revision as needs for national defense may require, have always assumed that domestic production and imports from appropriately factored foreign sources would be available, too, in a national defense emergency. In evaluating supply capability with respect to metals and minerals for such an emergency, OMM must consider all components of supply and the many factors which may influence the adequacy of each of them, including the stockpiles.

Changes in the technology of warfare, changes in use patterns of metals due to rapidly advancing developments through research, changes in domestic production capability for metals and minerals, changes in the rate of growth of our economy, changes in world production and consumption of these commodities —all may effect the security position of one or more of them. Long-term trends, as well as the immediate and near future prospects, must always be given proper weight, since the period between the start of exploration and development of major mining projects anywhere and the time when production begins is usually several years and, likewise, substantial growth in demand for a mineral in a newly developed application usually takes considerable time.

Constant vigilance is required to identify and evaluate shifts and trends in the supply-requirements position of the many metals and minerals important to national defense. Taking into account factors such as those mentioned above, OMM estimates supplies of mineral raw materials and, together with OCDM and other agencies, translates needs for end products into raw material requirements and then measures the requirements against the estimated supply capability. In these evaluations OMM utilizes the professional expertness and data of the Bureau of Mines and the Geological Survey. Thus, OMM serves as a focal point for the exercise of the vigilance so necessary to the whole of the Federal Government's determinations and actions pertaining to supply of metals and minerals for defense purposes. The conclusions of OMM are brought to bear on current programs of Government having an effect, whether direct or indirect, upon domestic production or production potential for metals and minerals essential to national defense. In addition, OMM's conduct of the readiness programs described in this report is preparing both Government and industry for prompt mobilization of metal and mineral and solid fuel resources in event of either a limited war or a general war, including attack upon the United States.

All of these activities of the Office of Minerals Mobilization contribute to and form an integral part of the total defense program of the United States.

## Minerals Exploration Program Under Authority of the Defense Production Act

### PROGRAM

The Office of Minerals Exploration is administering the liquidation of the program conducted from mid-1951 through June 30, 1958, by the Department of

the Interior through the former Defense Minerals Exploration Administration under section 303(a) of the Defense Production Act of 1950, as amended. The DMEA program was designed to encourage exploration for strategic and critical metals and minerals by private industry, with the Government participating in the cost of the projects. The DMEA continued to administer contracts in force from June 30, 1958, until it was succeeded by OME, which was established by the Secretary of the Interior on September 11, 1958, pursuant to Public Law 85–701, enacted August 21, 1958.

A summary of the operations on the DMEA program during the period from September 1, 1958, through August 31, 1959, is presented in this report. Future periodic reports to the Joint Committee on Defense Production will cover subsequent operations of the Office of Minerals Exploration with respect to DMEA contracts. Reports on the OME program under Public Law 85–701 are being submitted to the Congress, through the President, on March 1 and September 1 of each year, pursuant to section 5 of that statute.

### FINANCING THE DMEA PROGRAM

The DMEA program was financed by borrowing funds from the Treasury under authorization of the Defense Production Act of 1950, as amended. A total of $38.8 million of borrowing authority funds had been certified for the program by the Office of Defense Mobilization (now Office of Civil and Defense Mobilization), but $3 million was released on June 30, 1959, reducing the total to $35.8 million.

At that time the total of contract expenditures and obligations, administrative expenses, and interest payments to the Treasury since the beginning of the DMEA program was $36,541,465. Deducting royalty payments of $3,127,068 credited to the program, the net cost and obligations stood at $33,414,397. Thus, the balance of borrowing authority funds then available, after the reduction of the $3 million mentioned above, was $2,382,603. Estimated net expenses in fiscal year 1960 total $950,000 (including contract payments of $450,000 and Treasury interest of $1 million offset in part by royalty payments of $500,000). Therefore, the estimated balance of Defense Production Act funds certified for the DMEA program will be $1,435,603 on June 30, 1960. Because of the difficulty of precisely forecasting the rate of cash disbursements on contracts and the rate of royalty payments in this period of liquidation of the DMEA program, it is possible that the balance of funds available on June 30, 1960, will be lower than the estimate and that additional funds from the borrowing authority would be required to meet interest payments to the Treasury during the following year.

In a letter of July 15, 1959, to the director of OCDM, the Acting Secretary of the Interior reviewed the status of "borrowing authority" funds as related to the DMEA program and requirements through fiscal year 1960. He pointed out that while it was apparent that the OME could meet obligations expected to fall due in 1960, after allowing for the $3 million release mentioned above, the Department of the Interior must be assured that additional borrowing authority funds will be certified to OME in time to pay Treasury interest which will fall due in fiscal year 1961.

As of August 31, 1959, contract disbursements and obligations amounted to $24,885,561 compared to the maximum Government participation estimated at $34,823,125. The difference is accounted for by terminations and cancellations of contracts which occurred throughout the life of the program. Of the $24,885,561, only $22,876,043 had been disbursed. In addition, approximately $8,392,654 of Defense Production Act borrowing authority funds had been obligated for costs of administrative and technical services and about $3,132,980 paid or accrued for interest to August 31, 1959, on notes to the Treasury. Royalty payments to this date totaled $3,236,558.

In appropriating fiscal year 1959 funds for the new OME program, the Congress specified that not to exceed $900,000 of the amount provided would be available for administration and technical services and that not to exceed $200,000 would be available from the borrowing authority funds for administering the liquidation of contracts in force (i.e., DMEA contracts). This limitation on the amount that could be made available under the "borrowing authority" provided by section 304(b) of the Defense Production Act pertained only to costs of administration. It did not apply to the use of borrowing authority funds for interest on notes issued to the Treasury and such amendments of DMEA contracts in force as might be necessary to obtain definitive

results or otherwise to reach the targets of the projects. In fiscal year 1960, all costs of administration and technical services associated with the residual DMEA functions are being paid from funds appropriated to the Office of Minerals Exploration.

### AUTHORITY

The authority for the DMEA program was derived, and authority for administration of DMEA contracts in effect upon termination of the program continues to derive, from the Defense Production Act of 1950, as amended (50 U.S.C. App., 1952 ed., secs. 2061–2166; Public Law 85–471). Section 304 of Executive Order 10480, as amended (18 F.R. 4939; 21 F.R. 1673), conferred the authority respecting the program upon the Director of the Office of Defense Mobilization, and pursuant to paragraph 3 of Defense Mobilization Order No. I–7 (formerly DMO–30), as amended (18 F.R. 5366, 6737; 19 F.R. 7348), this authority was delegated to the Secretary of the Interior, to be exercised in accordance with programs certified by the Director, ODM. The Secretary redelegated his functions to the Administrator of the Defense Minerals Exploration Administration by Interior Orders 2726 (18 F.R. 3804), 2755 (19 F.R. 2503), 2764 (19 F.R. 4005), 2781 (20 F.R. 316), and 2822 (22 F.R. 5779). The program is set forth in DMEA Order-1, revised (22 F.R. 8304). Notice of termination of the program was announced June 6, 1958 (23 F.R. 4003).

Reorganization Plan No. 1 of 1958 (23 F.R. 4991) became effective July 1, 1958, merging the Office of Defense Mobilization and Federal Civil Defense Administration into a new Office of Defense and Civilian Mobilization. By Executive Order 10773 (23 F.R. 5061) issued on July 1, 1958, the President delegated to the Director of the new ODCM, among other powers, the authorities under the Defense Production Act previously delegated to the Director of the former ODM and authorized redelegation of such authorities. On the same date, the Director of ODCM issued ODCM Interim Directive No. 2, continuing in effect all delegations and orders of the former ODM and FCDA until rescinded, amended, or modified.

Public Law 85–763, approved August 26, 1958, amended Reorganization Plan No. 1 of 1958 to substitute the name "Office of Civil and Defense Mobilization" for the name "Office of Defense and Civilian Mobilization" wherever the latter name appeared in the plan. Executive Order 10782 (23 F.R. 6971), effective as of August 26, 1958, amended Executive Order 10773 to make references to names and titles consonant with the provisions of Public Law 85–763. Thus, as of August 26, 1958, the chain of delegated authority under the Defense Production Act for functions with respect to DMEA contracts still in effect extended from the President to the Director of the Office of Civil and Defense Mobilization, to the Secretary of the Interior, and to the Administrator of the Defense Minerals Exploration Administration.

The action of the Secretary of the Interior on September 11, 1958, establishing the Office of Minerals Exploration provided that authorities delegated to the Administrator of DMEA will continue to be exercised by the Director, Office of Minerals Exploration. This transfer was reflected in Secretary's Order No. 2833 (23 F.R. 7554), issued on September 22, 1958, superseding Order No. 2822.

### SUMMARY OF THE PROGRAM

Prior to July 1, 1958, the Defense Minerals Exploration Administration entered into contracts with private parties for the exploration of indicated or undeveloped sources of some 34 strategic and critical minerals and metals. No contracts were entered into after June 30, 1958. Each contract established an exploration project calling for specific work in a described area of land to be completed by the operator during a fixed period of time at costs estimated on either an actual or fixed cost basis. The total amount of the cost of the work to be done under the contract was limited, and the amount of the Government's participation was set at 50 to 75 percent of the allowable cost of the project, depending upon the minerals or metals sought. If two or more minerals or metals falling in different percentage groups were involved, the Government's contribution was set at 62.5 percent.

The exploration projects were approved by the Government only after careful investigation. They were based upon sound engineering and geological principles. Ordinarily projects were not approved for work that would require more than 2 years to complete; however, the time limit for most projects was fixed at a much shorter period.

The Government's contribution to the cost of a project was allowable only for necessary, reasonable, and direct costs of performing the exploration work.

The operator was not charged interest on the Government's contribution to the cost of a project. If the Government considered that a discovery or development from which production might be made had resulted from the work, the Government so certified and notified the operator. Upon certification, all mineral production from the land covered by the contract became subject to a royalty payable at a rate of 1½ to not more than 5 percent of the gross proceeds or value of such production for a period of usually 10 years from the date of the contract or until the full amount of the Government's contribution was repaid, whichever occurred first. Under certain conditions the repayment period was set for a period longer than 10 years. Regardless of certification, all ore produced from the project property during the time of the contract and for a period of 6 months after receipt of the operator's final report on the project was subject to the same royalty provisions.

*Organization for administration and coordination of the program*

Until September 11, 1958, when the residual functions were transferred to the Office of Minerals Exploration, the Defense Minerals Exploration Administration functioned as an organizational unit within the Department of the Interior under the supervision of the Assistant Secretary, Mineral Resources. A Policy and Coordinating Committee, comprised of the Assistant Secretary, Mineral Resources, as Chairman, the Administrator of the Defense Minerals Exploration Administration, the Director of the Bureau of Mines, and the Director of the Geological Survey, served as a primary point of contact with other Government agencies, interpreted Federal policy relating to activities of the DMEA, established the broad area of working arrangements for the conduct of the DMEA program, and reviewed progress of the program.

The DMEA did not maintain a technical field staff but utilized the services of the technical staffs of the Bureau of Mines and the Geological Survey for all field examinations, reports, project inspections, and field administration of exploration contracts, except auditing which was done by DMEA's own staff. The field work was performed under the direction of five regional field teams, each team comprised of an engineer from the Bureau of Mines and a geologist from the Geological Survey, with one being designated as the DMEA executive officer and the other as his alternate. All correspondence with and instructions to the field teams flowed through an operating committee in Washington which was composed of three members, one representing the Administrator of the DMEA, as Chairman, and one each representing the Directors of the Bureau of Mines and the Geological Survey.

Field auditors, under supervision of the DMEA headquarters in Washington, D.C., audited operators' accounts, determined the propriety of payments under exploration contracts and regulations, and audited ore-shipment records and royalty payment accounts for projects in accordance with practice of the General Accounting Office.

Since September 11, 1958, the OME has functioned under the supervision of the Assistant Secretary, Mineral Resources. It continues to utilize the services of the technical staffs of the Bureau of Mines and Geological Survey in the field and maintains its own auditing staff. The OME operates with a reduced number of personnel in keeping with its reduced workload.

Certain changes in location and area coverage of OME field offices, which handle certain aspects of DMEA contract administration and auditing, were effected by issuance of a revision of OME regulations published in the Federal Register of August 20, 1959. The following changes were made: The Region II office was moved from Reno, Nev., to San Francisco, Calif.; the Region III office in Denver, Colo., was moved from the new customhouse to the Denver Federal Center; the Region IV office in Joplin, Mo., was closed, and business in Kansas, Oklahoma, and Texas will be handled by Region III in Denver, Colo., while that in Arkansas, Louisiana, Missouri, and Mississippi will be handled by Region V in Knoxville, Tenn. The States thus added to Region III and Region V comprise the whole area previously serviced by the Region IV office.

*Cooperation with other agencies*

Like the DMEA, the OME maintains cooperative arrrangements with the Office of Civil and Defense Mobilization and the Office of Minerals Mobilization because of related interests and responsibilities in the minerals and metals field.

The Atomic Energy Commission and General Services Administration were consulted on matters of mutual interest. OME cooperated also with the Attorney General, Securities and Exchange Commission, Tariff Commission, Small Business Administration, and Treasury Department by furnishing information concerning the OME–DMEA programs.

### REPORT OF THE ATTORNEY GENERAL ON DMEA

In the fall of 1958, the Office of Minerals Exploration provided data and other assistance to the Department of Justice in connection with the preparation of the report entitled "Defense Minerals Exploration Assistance," dated November 10, 1958, which the Attorney General submitted to the President and the Congress pursuant to section 708(e) of the Defense Production Act of 1950, as amended. This report included a comprehensive review of the program conducted by the former Defense Minerals Exploration Administration. Its evaluation of the DMEA indicated that the program, in accomplishing its defense objectives, also strengthened to some extent the competitive structure of the domestic mining industry.

In January 1959 the OME furnished data to the Department of Justice on the DMEA program for another report by the Attorney General under the above-cited provision of the Defense Production Act, this one entitled "The Mercury Industry." This report was submitted by the Attorney General under date of February 9, 1959. Among other conclusions, it suggested a possible future improvement in competitive standing in the domestic mercury mining industry as a result of the DMEA program.

### LIQUIDATION OF THE DMEA PROGRAM

The progress of liquidating the DMEA program is indicated by the following paragraphs concerning applications, contracts, certifications of discovery or development, and repayment of the Government's contributions.

*Applications*

Although no applications for exploration aid under the DMEA program were accepted after June 30, 1958, 65 DMEA applications remained in various stages of processing on that date. The applicants were informed that their applications would be processed under the OME program upon written request. Fifteen of these 65 DMEA applicants have reapplied under the OME program, seven have stated their intentions to refile with OME, 12 have written that they are no longer interested in pursuing their applications, and 31 have not replied to letters written to them concerning their applications.

*Contracts*

The 157 DMEA contracts in force on August 31, 1958, have been reduced to 45 by completion or termination of the projects. Of the 1,159 contracts executed by DMEA, a total of 1,114 have been canceled or terminated. A total of 82 contracts have been canceled during the program without any authorized work being performed; therefore, the Government did not make any disbursements on them. The remaining 1,032 terminated contracts had an aggregate estimated cost of $46,533,036, with Government participation set at $29,059,597, but the actual cost to the Government was only $20,485,799.

*Certifications of discovery or development*

During the period September 1, 1958 (the date of available figures given in the Eighth Annual Report of the Joint Committee on Defense Production), through August 31, 1959, the DMEA certified 36 projects as discoveries or developments, making a total of 380 certifications under the program to date. Important ore showings have been reported on eight other projects which may eventually be certified on their completion. Of the 380 certified projects, 376 have been terminated or completed and 4 are still in operation under DMEA contracts. The total estimated cost of these 380 certified projects, including 2 on which no Government funds were disbursed, was $26,634,381, of which the Government's estimated share was $16,711,023. To date, however, the Government has disbursed only $13,571,820 on them. These 380 certified projects, located in 31 States, covered a search for 25 strategic and critical minerals and metals. All contracts provide for payment of royalties if the projects are certified. Also, under certain conditions, provisions are incorporated in the contracts for royalty payments even though the projects are not certified. Since the in-

ception of the DMEA program, 70 contracts have been executed or amended to provide for royalty payments regardless of certification.

*Repayments*

During the 12-month period ending August 31, 1959, repayments of the Government's contribution through royalties on production amounted to $609,095, bringing the total of such payments since the beginning of the program to $3,236,558. Operators on 44 projects have repaid in full the sums advanced to them, aggregating $1,340,156, and 360 others have made royalty payments. Of the 404 projects on which royalties have been paid, 278 have been certified and 126 have not been certified. Of the latter, 20 made payments under royalty agreements.

The production on which royalties have been paid to date is estimated to have had a gross value to the operators of approximately $66 million. The gross value of the recoverable minerals in the potential ore reserves inferred on the 380 certified projects is estimated to be in excess of $740 million at current market prices.

## NEED FOR THE PROGRAM

The need for the program administered by the Defense Minerals Exploration Administration has been comprehensively stated in all of the previous annual reports to the Joint Committee on Defense Production. The program helped to assure adequate supplies of ore for the production of metals and minerals to meet requirements of national defense programs during the Korean emergency and the following period of sustained military preparedness. The program also helped to assure sufficient ore reserves in support of an adequate mobilization base for the future. The interest of industry in the program was widespread as indicated by the facts that applications were received from 44 States, including Alaska, and that contracts were executed for projects in 36 States, including Alaska.

With the attainment of expansion goals and the reduction of military requirements, available supplies of most minerals have become more than adequate for military programs and the current needs of our growing economy. Thus, the need for exploration to keep up with current demand for minerals and metals has lessened. The need, however, remains for exploration to assure our future requirements for minerals and to reduce our dependence on foreign sources in times of emergency.

It is generally recognized that a continuing program of exploration is essential for the long-range security of the United States with respect to mineral supply, as well as for its economic growth.

With the establishment of the Office of Minerals Exploration under Public Law 85–701, we believe that adequate assistance is available for exploration for those few minerals for which increased supplies would be desirable for defense requirements and also to encourage operators to explore for other basic minerals essential for the long-range security of the Nation.

## SMALL BUSINESS PARTICIPATION IN THE PROGRAM

The DMEA program appealed especially to small business. A large number of small operators, including individuals, partnerships, and corporate enterprises, participated in the program, particularly in exploring for highly strategic minerals not found in the United States in deposits of sufficient size to be of interest to large companies. These small operators were given maximum encouragement because of the urgent need for the scarcer strategic and critical minerals and the importance of the group in the mining industry. Approximately 60 percent of all DMEA contracts called for expeditures of $25,000 or less and about 43 percent of them provided for the operator to spend less than $3,000 of his own funds or furnish an equivalent amount in the value of his own labor, supervision, or equipment to complete the contract. In excess of 80 percent of the participants were classed as small business based upon financial standing, annual production, number of employees, and prominence in the particular field in the mineral industry.

STATISTICAL SUMMARY OF THE DMEA PROGRAM

The following tabulations give a complete summary of the DMEA program through August 31, 1959. The tables included are listed below:

I. Summary of DMEA applications and contracts.

II. Distribution of DMEA contracts in force (by commodity, State, and region) as of August 31, 1959.

III. Disbursements and repayments on contracts, by regions, as of August 31, 1959.

IV. DMEA projects terminated and certified—commodity distribution—through August 1959.

V. DMEA projects terminated and certified—State distribution—through August 1959.

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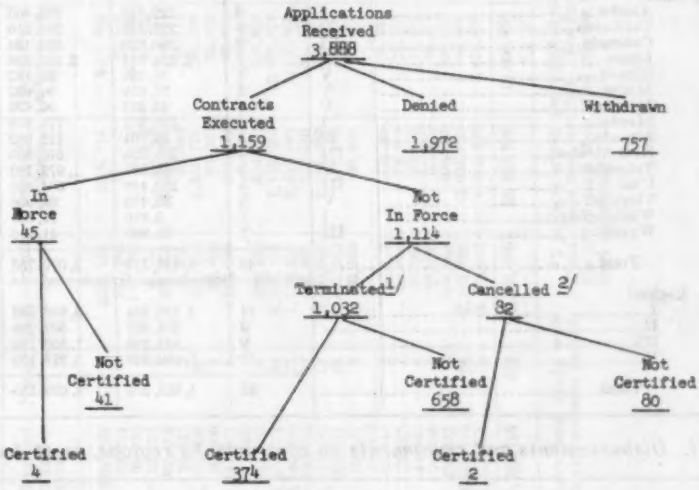
## *I. Summary of DMEA applications and contracts*

### A. STATUS




1/ No more work will be done with Government financial assistance

2/ No Government money spent.

### B. CONTRACT AMOUNTS

| Status | Number | Government participation | Value of contract | Government participation spent |
|---|---|---|---|---|
| In force and certified | 4 | $779,565 | $1,090,807 | $565,192 |
| In force, not certified | 41 | 3,633,814 | 6,988,948 | 1,825,052 |
| Terminated and certified | 374 | 15,885,699 | 25,487,736 | 13,006,628 |
| Terminated, not certified | 658 | 13,173,898 | 21,045,300 | 7,479,171 |
| Canceled and certified | 2 | 45,759 | 55,838 | ---------- |
| Canceled, not certified | 80 | 1,304,390 | 2,133,553 | ---------- |
| Total | 1,159 | 34,823,125 | 56,802,182 | 22,876,043 |

*II. Distribution of DMEA contracts in force (by commodity, State, and region) as of Aug. 31, 1959*

| | Region | Number | Government participation | Value of contract | Percent distribution of Government participation |
|---|---|---|---|---|---|
| (a) Commodity: | | | | | |
| Cobalt-nickel | | 3 | $176,894 | $264,092 | 4.0 |
| Copper | | 3 | 55,266 | 110,532 | 1.2 |
| Fluorspar | | 1 | 19,596 | 39,192 | .4 |
| Lead-zinc | | 16 | 1,547,073 | 3,094,146 | 35.1 |
| Lead-zinc-copper | | 11 | 1,322,180 | 2,644,360 | 30.0 |
| Manganese | | 2 | 496,184 | 661,579 | 11.2 |
| Mercury | | 4 | 352,223 | 503,736 | 8.0 |
| Molybdenum | | 1 | 255,250 | 510,500 | 5.8 |
| Tungsten | | 1 | 96,852 | 129,136 | 2.2 |
| Uranium | | 3 | 91,861 | 122,482 | 2.1 |
| Total | | 45 | 4,413,379 | 8,079,755 | 100.0 |
| (b) State: | | | | | |
| Alaska | I | 2 | 222,810 | 301,060 | 5.0 |
| California | II | 6 | 225,533 | 394,316 | 5.1 |
| Colorado | III | 6 | 280,620 | 534,124 | 6.4 |
| Idaho | I | 7 | 1,334,613 | 2,562,308 | 30.2 |
| Illinois | V | 1 | 19,596 | 39,192 | .4 |
| Maine | V | 1 | 71,019 | 94,692 | 1.6 |
| Missouri | V | 1 | 49,935 | 99,870 | 1.1 |
| Montana | I | 4 | 555,271 | 772,675 | 12.6 |
| Nevada | II | 3 | 59,704 | 112,982 | 1.4 |
| New Mexico | III | 1 | 255,250 | 510,500 | 5.8 |
| Tennessee | V | 9 | 986,395 | 1,972,790 | 22.4 |
| Utah | III | 1 | 282,440 | 564,880 | 6.4 |
| Virginia | V | 1 | 33,453 | 66,906 | .8 |
| Washington | I | 1 | 5,810 | 11,620 | .1 |
| Wyoming | III | 1 | 30,930 | 41,240 | .7 |
| Total | | 45 | 4,413,379 | 8,079,755 | 100.0 |
| (c) Region: | | | | | |
| I | | 14 | 2,118,504 | 3,648,263 | 48.0 |
| II | | 9 | 285,237 | 507,298 | 6.5 |
| III | | 9 | 849,240 | 1,650,744 | 19.2 |
| V | | 13 | 1,160,398 | 2,273,450 | 26.3 |
| Total | | 45 | 4,413,379 | 8,079,755 | 100.0 |

*III. Disbursements and repayments on contracts, by regions, as of Aug. 31, 1959*

| Region | Disbursements | Repayments |
|---|---|---|
| I | $7,652,424.65 | $974,735.01 |
| II | 2,823,287.08 | 739,448.84 |
| III | 7,708,426.24 | 1,082,809.42 |
| IV | (1) | |
| V | 4,691,905.40 | 439,564.61 |
| Total | 22,876,043.37 | 3,236,557.88 |

[1] Transferred to regions III and V.

IV. *DMEA projects terminated and certified—commodity distribution—through August 1959*

| Commodity | Projects terminated (including certifications) | | | | Certified projects terminated [1] | | | | Certified projects in force | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Government participation | Value of contract | Government participation spent | Number | Government participation | Value of contract | Government participation spent | Number | Government participation | Value of contract | Government participation spent |
| Antimony | 11 | $366,372 | $488,496 | $286,069 | 4 | $229,958 | $306,611 | $204,802 | | | | |
| Asbestos | 19 | 552,851 | 615,891 | 253,264 | 5 | 117,285 | 131,930 | 92,825 | | | | |
| Beryl-mica | 20 | 203,262 | 227,744 | 98,920 | 8 | [2] 47,760 | [2] 53,067 | [2] 37,506 | | | | |
| Chromium | 2 | 37,825 | 75,649 | 28,297 | 1 | 25,737 | 51,474 | 21,636 | | | | |
| Cobalt-nickel | 10 | 1,380,222 | 2,086,112 | 967,505 | 4 | 981,621 | 1,514,890 | 776,095 | | | | |
| Columbium-tantalum | 3 | 47,005 | 52,228 | 30,625 | 2 | 43,821 | 48,690 | 29,313 | | | | |
| Copper | 42 | 1,514,028 | 3,028,057 | 1,052,638 | 17 | 927,888 | 1,855,776 | 730,298 | | | | |
| Corundum | 1 | 32,400 | 36,000 | 32,400 | 1 | 32,400 | 36,000 | 32,400 | | | | |
| Fluorspar | 18 | 295,442 | 580,881 | 181,937 | 6 | 113,208 | 216,414 | 86,851 | | | | |
| Graphite | 1 | 925 | 1,850 | 889 | | | | | | | | |
| Iron | 4 | 283,400 | 566,800 | 141,340 | 3 | 259,350 | 518,700 | 134,813 | | | | |
| Lead-zinc | 169 | 6,961,293 | 13,929,287 | 5,224,374 | 68 | 3,559,181 | 7,125,065 | 2,976,871 | | | | |
| Lead-zinc-copper | 50 | 3,093,846 | 6,187,689 | 2,640,482 | 15 | 1,770,822 | 3,541,644 | 1,708,950 | 2 | $77,080 | $154,160 | $65,243 |
| Manganese | 26 | 760,390 | 1,035,120 | 498,126 | 13 | 487,990 | 672,040 | 361,250 | 1 | 486,545 | 648,727 | 347,687 |
| Mercury | 37 | 1,614,964 | 2,157,266 | 1,033,410 | 13 | 793,867 | 1,058,489 | 637,411 | 1 | 215,940 | 287,920 | 152,262 |
| Mica | 289 | 1,361,561 | 1,670,878 | 997,317 | 68 | 422,183 | 507,385 | 365,954 | | | | |
| Monazite | 5 | 106,452 | 122,759 | 76,237 | 4 | 80,509 | 93,934 | 61,973 | | | | |
| Platinum | 1 | 24,300 | 30,000 | 16,812 | | | | | | | | |
| Rutile | 2 | 33,171 | 44,228 | 25,545 | 2 | 33,171 | 44,228 | 25,545 | | | | |
| Sulfur | 2 | 89,280 | 178,560 | 28,595 | 1 | 39,705 | 79,410 | 23,706 | | | | |
| Talc | 1 | 29,267 | 32,519 | 11,662 | 1 | 29,267 | 32,519 | 11,662 | | | | |
| Thorium | 7 | 143,662 | 168,154 | 94,408 | 3 | 48,826 | 57,402 | 36,379 | | | | |
| Tin | 5 | 481,348 | 534,831 | 429,843 | 3 | 448,948 | 498,831 | 398,957 | | | | |
| Tungsten | 114 | 3,481,429 | 4,662,588 | 2,457,170 | 54 | 2,273,860 | 3,031,809 | 1,796,937 | | | | |
| Uranium | 193 | 6,164,992 | 8,019,449 | 3,877,934 | 78 | 3,118,342 | 4,011,428 | 2,454,494 | | | | |
| Total | 1,032 | 29,059,597 | 46,533,036 | 20,485,799 | 374 | 15,385,699 | 25,487,736 | 13,006,628 | 4 | 779,565 | 1,090,807 | 565,192 |

[1] In addition to these formal certifications royalty agreements have been made with operators on 70 contracts having an aggregate cost of $7,059,212 with Government participation of $3,845,312.

[2] 2 projects which are classified as "Cancellations"—i.e., no Government funds were spent—have been certified. The figures for these 2 projects are omitted as indicated from the distribution of certified projects terminated, but they are reported in item 1B, "Contract amounts."

V. *DMEA projects terminated and certified—State distribution, through August 1959*

| State | Projects terminated (including certifications) | | | | Certified projects terminated [1] | | | | Certified projects in force | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Government participation | Value of contract | Government participation spent | Number | Government participation | Value of contract | Government participation spent | Number | Government participation | Value of contract | Government participation spent |
| Alabama | 6 | $148,733 | $266,986 | $93,581 | 3 | $135,558 | $250,620 | $90,399 | | | | |
| Alaska | 18 | 1,174,938 | 1,516,361 | 833,877 | 6 | 622,817 | 740,443 | 531,183 | 1 | $215,940 | $287,920 | $152,262 |
| Arizona | 37 | 1,090,549 | 1,734,397 | 600,840 | 18 | 626,402 | 1,076,423 | 417,609 | | | | |
| Arkansas | 5 | 129,685 | 172,913 | 55,166 | 2 | 27,000 | 36,000 | 24,247 | | | | |
| California | 54 | 2,102,681 | 3,024,225 | 1,408,578 | 23 | 1,136,647 | 1,688,794 | 942,527 | 1 | 29,410 | 58,820 | 22,921 |
| Colorado | 119 | 3,161,025 | 4,723,285 | 2,187,525 | 53 | 1,619,371 | 2,249,720 | 1,367,310 | 1 | 47,670 | 95,340 | 42,322 |
| Florida | 1 | 15,675 | 20,900 | 15,209 | 1 | 15,675 | 20,900 | 15,209 | | | | |
| Georgia | 22 | 128,518 | 160,781 | 80,368 | 6 | 45,341 | 59,218 | 35,045 | | | | |
| Idaho | 77 | 4,897,107 | 8,816,344 | 3,815,693 | 31 | 2,947,817 | 5,325,120 | 2,483,645 | | | | |
| Illinois | 7 | 139,080 | 275,349 | 88,263 | 3 | 90,485 | 180,969 | 65,539 | | | | |
| Iowa | 1 | 14,850 | 29,700 | 14,850 | 1 | 14,850 | 29,700 | 14,850 | | | | |
| Kentucky | 4 | 88,232 | 176,464 | 41,570 | | | | | | | | |
| Maine | | | | | | [2] | [2] | [2] | | | | |
| Maryland | 1 | 3,779 | 7,558 | 1,657 | | | | | | | | |
| Michigan | 2 | 340,652 | 681,303 | 304,139 | 2 | 340,652 | 681,303 | 304,139 | | | | |
| Missouri | 11 | 926,774 | 1,696,933 | 853,283 | 6 | 881,915 | 1,607,214 | 839,705 | | | | |
| Montana | 59 | 1,448,802 | 2,288,073 | 931,756 | 18 | 751,896 | 1,118,371 | 573,701 | 1 | 486,545 | 648,727 | 347,687 |
| Nevada | 59 | 1,690,056 | 2,750,812 | 1,279,819 | 24 | 923,348 | 1,370,914 | 761,337 | | | | |
| New Hampshire | 4 | 23,274 | 26,110 | 18,125 | 1 | 4,059 | 4,510 | 1,772 | | | | |
| New Jersey | 2 | 142,775 | 285,550 | 60,714 | 1 | 141,850 | 283,700 | 59,825 | | | | |
| New Mexico | 30 | 1,505,025 | 2,365,337 | 893,924 | 11 | 460,880 | 676,652 | 331,140 | | | | |
| New York | 1 | 8,265 | 11,020 | 6,751 | | | | | | | | |
| North Carolina | 265 | 1,477,868 | 1,858,812 | 1,122,953 | 61 | 578,252 | 715,593 | 509,789 | | | | |
| Oklahoma | 2 | 84,952 | 163,725 | 29,046 | | | | | | | | |
| Oregon | 11 | 230,698 | 309,330 | 132,423 | 2 | 117,330 | 156,440 | 80,836 | | | | |
| South Carolina | 3 | 56,373 | 69,021 | 48,276 | 1 | 47,802 | 57,593 | 40,667 | | | | |
| South Dakota | 23 | 329,968 | 395,725 | 165,864 | 9 | 129,737 | 155,173 | 78,815 | | | | |
| Tennessee | 5 | 667,233 | 1,328,450 | 622,828 | 2 | 562,075 | 1,124,150 | 561,995 | | | | |
| Texas | 8 | 303,176 | 428,325 | 111,079 | 1 | 60,000 | 80,000 | 46,465 | | | | |
| Utah | 99 | 4,382,109 | 6,924,571 | 3,142,040 | 47 | 2,336,681 | 3,673,020 | 1,944,140 | | | | |
| Vermont | 4 | 177,811 | 248,342 | 151,044 | 2 | 81,941 | 113,882 | 72,229 | | | | |
| Virginia | 15 | 198,987 | 363,385 | 132,959 | 3 | 59,946 | 88,428 | 27,401 | | | | |
| Washington | 41 | 940,220 | 1,706,233 | 657,288 | 12 | 294,673 | 539,304 | 254,465 | | | | |
| Wisconsin | 15 | 363,440 | 729,583 | 275,985 | 10 | 344,420 | 695,543 | 267,150 | | | | |
| Wyoming | 21 | 666,287 | 977,133 | 308,326 | 14 | 485,279 | 688,039 | 263,494 | | | | |
| Total | 1,032 | 29,059,597 | 46,533,036 | 20,485,799 | 374 | 15,885,699 | 25,487,736 | 13,006,628 | 4 | 779,565 | 1,090,807 | 565,192 |

Identical footnotes 1 and 2 apply to tables 5 and 6.

## Fish and Fishery Products

### PROGRAM

Mobilization functions with respect to the production and processing of fish and fishery products are carried out under a redelegation of authority from the Secretary of Agriculture to the Secretary of the Interior.

These activities include the preparation of plans for the continued operation of the fishing and the fish processing industries to assure an adequate supply of the products of these industries in time of national emergency. This work is done by the Bureau of Commercial Fisheries, under the supervision of the Commissioner of Fish and Wildlife.

Programs of the Bureau of Commercial Fisheries for maintaining the production and processing of fishery products during a period of national emergency would be correlated with the overall program of the Department of Agriculture for providing an adequate supply of food. The activities presently being carried on involve the training of Bureau personnel in producing and processing areas so that in a national emergency the measures included in mobilization plans designed to maintain the catch of fishery products and necessary processing of the catches could be initiated promptly and effectively.

### AUTHORITY

Responsibilities of the Department of the Interior in this area of defense mobilization planning derive from Defense Food Delegation No. 2, Revision 1: Delegation of authority with respect to fishery commodities or products, from the Secretary of Agriculture to the Secretary of the Interior and, also, Defense Mobilization Order I–13, issued by the Director of the former Office of Defense Mobilization and continued in effect by the Director of the Office of Civil and Defense Mobilization.

The delegation from the Secretary of Agriculture, published in the Federal Register on March 19, 1952 (17 F.R. 2369), delegated to the Secretary of the Interior the priority and allocation authority under the Defense Production Act of 1950, as amended, with respect to the production of fishery commodities or products and, also, certain related claimant functions. Defense Mobilization Order I–13 (19 F.R. 7348), dated November 12, 1954, assigned to the Secretary of the Interior responsibility for the development of preparedness measures relating to specified industries and products, including fisheries' commodities or products as assigned by the Secretary of Agriculture.

When the former Defense Fisheries Administration was abolished on June 30, 1953, the Secretary of the Interior delegated to the Director of the Fish and Wildlife Service defense functions relating to the production of fishery commodities or products. This was done by Secretary's order No. 2726, dated June 30, 1953 (18 F.R. 3804). This delegation was continued in superseding orders which in effect were revisions of order No. 2726 until July 11, 1957. Then, due to the reorganization of the Fish and Wildlife Service, it was necessary to change the delegation of these defense functions so that it would run to the Commissioner of Fish and Wildlife rather than to the Director of the Fish and Wildlife Service, a position no longer applicable to the Service. This change in the delegation was accomplished by Secretary's order No. 2822 (22 F.R. 5779), issued on July 11, 1957. The delegation has been continued unchanged in Secretary's order No. 2833 (23 F.R. 7554), issued September 22, 1958, superseding order No. 2822. Under the supervision of the Commissioner of Fish and Wildlife, the Bureau of Commercial Fisheries carries on defense mobilization planning activities.

### SUMMARY OF PROGRAM ACTIVITIES

Under the delegation from the Secretary of Agriculture to the Secretary of the Interior, the Bureau of Commercial Fisheries makes plans to perform the following functions in time of an emergency:

1. Serve as claimant agency for the commercial fishing and fish processing industries with respect to critical materials and equipment.
2. Serve as liaison between the commercial fishing and fish processing industries and other defense agencies with respect to facilities, manpower, and other related resources essential to continued operation.

3. Provide basic data for OCDM in its development of price ceilings for fishery products in the event that the emergency necessitates invocation of price controls.

4. Develop recommendations with respect to financial aids and incentives required to achieve any needed increase in supply of fishery products, and make recommendations on applications for such assistance.

5. Develop recommendations for allocations of raw fishery products, and direct diversion of fishing fleets to the extent required by the nature of the emergency and the availability of processing facilities and manpower.

6. Obtain and evaluate damage to commercial fish production and processing facilities and plan with appropriate defense agencies for rehabilitation and resumption of required activities.

*Field organization*

Because of the widely dispersed nature of the fishing industry, it is especially important that there be a strong regional, as well as a central, organization to assist the fishing and fish processing industries in meeting requirements for their products in time of national emergency.

Responsibility for direction of emergency activities in the field has been delegated to the five regional and two area offices of the Bureau of Commercial Fisheries. A nucleus staff presently exists in each of these offices, and these staffs would be augmented by additional personnel in event of an emergency.

To develop readiness of the regional organization for emergency operations, training is needed at the field level. It is on this facet of preparedness that the Bureau is now placing emphasis. Operation Alert 1959 and preparations incident to the exercise were utilized to advance the training of personnel in several of the Bureau's field offices.

*Operation Alert 1959*

In Operation Alert 1959, representatives of most of the Bureau's regional and area offices participated at the OCDM Regional Offices during the regional phase of the exercise, July 8–10. A number of these representatives had not previously participated in consideration of the type of resource management problems posed in this exercise. The experience which they gained will be helpful to them in defense mobilization planning to be carried on in the future by their respective offices.

Members of the staff of the Washington headquarters of the Bureau of Commercial Fisheries took part in the national phase of Operation Alert 1959, held during the period August 24–28.

The planning which was done in connection with both the regional and national phases of the exercise has been effective in further developing programs and procedures which would assist the domestic fishing and fish processing industries in meeting requirements for fishery products during a national emergency.

## SMALL BUSINESS

The operations of the Bureau of Commercial Fisheries are related primary to small business enterprises since, with few exceptions, commercial fishing operations and processing of fish and shellfish are carried on by individual fishermen and small companies.

## CURRENT NEED FOR THE PROGRAM

The domestic fisheries are of importance to the national defense because of the large volume of food and industrial items produced. In any national emergency, our fishery resources would be a valuable source of protein food, but particularly so in a postattack period since much of the catch is taken near heavily populated areas and it is believed that fish and shellfish would be less affected by radioactive fallout than many foods produced on land.

Defense mobilization planning now being done is essential to preparedness for swift marshaling of fishery resources in a national emergency. This planning supplements the regular, peacetime programs of the Bureau of Commercial Fisheries. These regular programs help to maintain the mobilization base for fishery products. It is hoped that this base would be adequate for production of required quantities of fishery commodities, even after allowance for the anticipated diversion of some fishing craft for use in military operations in an emergency and, in event of attack, destruction of some shore installations.

## APPENDIX A

### STATUS OF STUDIES AND RESEARCH ON LIGHT METALS

Brief summary reports by the Bureau of Mines and the Geological Survey on their respective studies and research activities relating to light metals during the last year and the status of projects at the close of September 1959 are presented below.

#### BUREAU OF MINES

The Bureau of Mines is continuing its investigations on the recovery of alumina from the submarginal bauxites of Oregon, Arkansas, and Hawaii. Although no commercial products resulted from the work on Hawaiian bauxite the large size of the deposits justifies further work. Several processes for recovering alumina from nonbauxitic raw materials are being analyzed and evaluated to help guide research. Results will be published as a comprehensive report which will include balanced flowsheets and estimates of heat balances, costs, and capital investment. A small experimental reduction cell for the production of aluminum from alumina was developed and a number of operational variables are being studied in an attempt to improve the efficiency of aluminum electrolytic reduction cells.

The Bureau of Mines is continuing field studies of the Nation's titanium resources. Bureau metallurgists will continue to investigate electrochemical and chlorination processes for making high purity titanium and on techniques to improve its method for melting and casting titanium metal. In cooperation with the General Services Administration the Bureau will continue research designed to appraise the commercial possibilities of its electrolytic refining process. Other metallurgical research by the Bureau will include physical metallurgy studies aimed at developing new alloys of titanium and evaluating the properties of metal produced in Bureau research.

Studies are underway to develop magnesium alloys, with three or more components, which will have new uses or improved service characteristics. The Bureau will continue a comprehensive review and analysis of damping capacity of commercial and new magnesium alloys in various semifabricated forms. Laboratory work will include investigations of the effect of heat treatment on the physical properties of the alloys.

#### GEOLOGICAL SURVEY

During the report period, Geological Survey field investigations were in progress on beryllium-bearing deposits in the southern Black Hills, S. Dak., and in the Lake George area, Colorado; and on alumina-bearing deposits on the island of Kauai, Hawaii, and in Washington State. Research and laboratory studies continued on techniques and methods of detection or evaluation of light metals occurring in sparse or trace amounts in various source materials such as lateritic clay and coal.

Geologic mapping has been completed on about half the total area containing the beryl pegmatite deposits in the southern Black Hills, S. Dak. It is clear on geologic evidence that these and other beryl pegmatites in the United States could not support a large increase in the demand for beryllium.

The geology and reserve potential of newly discovered and important deposits of beryl in quartz-mica-fluorite veins near Lake George, Colo., are the objectives of a study which began in this area during the report period. A field analysis unit for quantitative determinations of beryllium has been set up for use on the Lake George project. This provides an analytical tool that is both rapid and accurate. Previous methods of evaluation were by visual inspection or chemical analysis of rock samples.

A study of the geology and resources of the bauxite deposits on the island of Kauai was undertaken near the close of the report period. Among the objectives of the study will be an evaluation of the deposits for mineral potential other than bauxite. There may be a possibility of producing titanium, columbium, or other metals as a byproduct of aluminum.

High-alumina clay deposits in the Greenacres quadrangle near Spokane, Wash., are being mapped and studied. Objectives include determination of reserves, study of the mineralogy of the deposits, and a study of the relationship of the clay to the weathered rocks and erosion surfaces as a possible guide to potentially favorable areas.

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Work continued on an extensive study of the bauxite resources of the southeastern United States. Detailed geologic field investigations in the Gulf Coastal Plain and the southern Appalachian regions have been completed. Laboratory work, particularly on heavy mineral concentrates in the bauxite and surrounding materials, is continuing.

Research and laboratory studies in progress include a study of the weathering processes that lead to the formation of bauxite. Phase equilibrium studies involving the design and construction of extensive equipment are in progress on a variety of synthetic mineral systems. Work has been directed in particular at equilibria involving soda, potassia, magnesia, aiumina, silica, and water.

A spectroscopic study is underway on the occurrence and distribution of trace elements in many of the major coalbeds in the United States. Surprisingly large concentrations of germanium and beryllium have been found in the ash derived from some coals.

Work is in progress on a new and improved method for the analysis of microgram amounts of zirconium in complex natural materials.

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## GENERAL SERVICES ADMINISTRATION

GENERAL SERVICES ADMINISTRATION,
*Washington, D.C., September 18, 1959.*

HON. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Washington, D.C.*
(Attention: Mr. Harold J. Warren).

DEAR MR. CHAIRMAN: A summary of the mobilization activities of the General Services Administration for the past year is enclosed as requested in your letter of August 10.

Sincerely yours,

FRANKLIN FLOETE, *Administrator.*

### MOBILIZATION ACTIVITIES OF THE GENERAL SERVICES ADMINISTRATION DURING THE PERIOD JULY 1, 1958, THROUGH AUGUST 15, 1959

The mobilization programs conducted by the General Services Administration include:

Mobilization readiness programs:
- Mobilization readiness planning.
- Continuity of Government.
- Telecommunications.
- Preservation of essential records.
- GSA support to OCDM emergency supplies and equipment program.

Production programs:
- National stockpile.
- Materials expansion.
- Machine tools.
- Operation of Government-owned plant.
- Dispersal of facilities.
- Financial assistance.

#### AUTHORITY FROM WHICH GSA DERIVES ITS POWERS

The mobilization programs of GSA have been established in accordance with the policies and directives of the Office of Civil and Defense Mobilization and its predecessor agencies. GSA functions relating to these programs are based on the following authorities:

- Defense Production Act of 1950 and Executive Order 10480, both as amended.
- Strategic and Critical Materials Stockpiling Act.
- National Industrial Reserve Act of 1948.
- Section 168 of the Internal Revenue Code of 1954, as amended.
- Federal Property and Administrative Services Act of 1949, as amended.
- Federal Civil Defense Act of 1950, as amended.
- Federal Register Act, as amended.
- Executive Orders 10346 and 10660.

The responsibilities of GSA under the Defense Production Act of 1950, as amended, and Executive Order 10480, as amended, are listed below.

1. Purchasing and making commitments to purchase metals, minerals, and other materials for Government use or resale, and performing or providing for inspection, refining, processing, transportation, and storage operations incident thereto.

2. Guaranteeing private loans to contractors, subcontractors, and others when necessary to expedite production and deliveries or services under Government contracts for the procurement of materials or the performance of services for the national defense.

3. Certifying to the Secretary of the Treasury or the Export-Import Bank of Washington the essentiality of making direct Government loans to aid in carrying out defense contracts, to the extent that such loans are a part of and in accordance with the terms of programs certified to GSA by the Director of the Office of Defense Mobilization (now OCDM). (Defense Mobilization Order No. 1-7.)

4. Installing additional equipment, facilities, processes, or improvements to plants, factories, and other industrial facilities owned by the U.S. Government, and installing Government-owned equipment in privately owned plants, factories, and other industrial facilities.

5. Encouraging the development and mining of strategic and critical metals and minerals in carrying out any program certified to GSA by the Director of the Office of Defense Mobilization (now OCDM). (Interior Defense Delegation 1.)

### SUMMARY OF MOBILIZATION PROGRAMS

*Mobilization readiness planning*

GSA established regional boundaries for civil-defense purposes and national emergencies to conform with the regional pattern of the Office of Civil and Defense Mobilization.

*Continuity of Government*

Programs for assuring continuity of essential functions in an attack situation were advanced during the year. The GSA unit of the national defense executive reserve was established and a training program was initiated for the reservists selected.

The communications corps was strengthened by the hiring of employees in the vicinity of the relocation site for the central office. A minimum communications capability will be assured in the event central-office members of the corps are unable to reach the site in an emergency.

*Telecommunications*

During the year 65 duplex circuits were installed to connect agency relocation sites with the relocated relay centers. These circuits render service to approximately 100 relocated agency activities.

One additional relocated relay center, Philadelphia B, was added and two existing relocated relay centers, Seattle B and Eastern Switching Center B, were increased in capacity.

*Preservation of essential records*

Two activities relating specifically to preservation of essential records are administered by the GSA National Archives and Records Service: (1) Selection and protection of vital records, and (2) maintenance of a permanent Emergency Federal Register and Emergency Code of Federal Regulations.

*Vital records.*—The purpose of this program is to permit continuity of Government and other activities necessary in time of emergency. At the request of ODM (now OCDM), GSA has established standards and furnished staff work on the selection and protection of vital records, published a handbook for the use of agencies in developing and operating vital records programs, and established a depository suitable for the storage of indispensable records.

Each Federal agency has developed and maintained a program for the protection of vital records to assure that such records will be available at the time and place they are needed. The program has been integrated with other emergency and relocation programs so that (1) agencies are operating continuing programs for selecting, shipping, storing, and keeping current the records needed in emergency operations, (2) coordination and review are carried out by GSA and

reported on to OCDM, and (3) periodic review of uses made of the records during Operations Alert have kept the program current.

The National Archives and Records Service has regularly furnished to agencies during the past years technical assistance in the vital records program. It also has assisted agencies in the evaluation of their programs for the protection of vital records and has participated in departmental and field conferences and meetings on related subjects. During the past year GSA has begun the operation of an underground vital records depository designed especially for the security storage of indispensable records. Four agencies are now using this facility and others have indicated their desire to do so.

In addition to the strengthening of the present programs for the protection of vital headquarters records, it is planned to extend the program to the field with appropriate instructions on vital functions and records, and the development of a reporting system. An improved reporting form for headquarters records is also planned. A review of the protection being given by agencies to personnel records will be made as part of the work of the Committee on Pay and Personnel Records.

*Emergency Federal Register and Code of Federal Regulations.*—The President is authorized by the Federal Register Act (70 Stat. 337; 44 U.S.C. 305(c)) to suspend publication of the Federal Register during an emergency period and is required thereupon to establish an alternate system or systems for promulgating, filing, or publishing executive agency documents. Two alternate systems have been proposed, and one has been approved. Many standby Presidential Executive orders and proclamations have been prepositioned with the Emergency Federal Register office, but few emergency documents have been submitted by the executive agencies.

The compilation and printing of the Exercise Emergency Federal Register for use during Operation Alert, 1959, brought together the up-to-date texts of agency emergency documents and the Presidential material. Thus the 1959 Exercise EFR virtually constitutes a temporary Code of Emergency Federal Regulations.

It is planned to use the documents published in the 1959 Exercise EFR, together with certain prepositioned material, as the basis for a continuing code of Emergency Federal Regulations. Copies of the CEFR at relocation sites of the respective agencies would be prepositioned, and the CEFR would be kept up to date by issuance of supplements containing current amendments and additions.

*GSA support to OCDM emergency supplies and equipment program*

GSA continued to provide OCDM with direct management and operational support in the storage, warehousing, and maintenance of medical, engineering, and radiological supplies. A memorandum of agreement dated February 7, 1956, established functional responsibilities for this program. Under the agreement terms, GSA is responsible for (1) procuring warehouse space in Government-owned facilities or by lease; (2) assuming custody of stockpiles of medical, engineering, and radiological supplies; (3) providing care and protection to these stockpiles; (4) servicing and maintaining medical and engineering stockpiles in ready condition at all times; and (5) providing necessary staff and equipment to operate warehouse depot facilities.

As of August 15, 1959, GSA operated 22 depot facilities for OCDM with a combined inventory of about $100 million worth of supplies and equipment in 2,250,000 square feet of space. Since the end of June 1958, two depots in commercially leased properties had been deactivated and consolidated with existing depots in Government-owned facilities. The inventory of medical, engineering, and radiological supplies was about $2 million higher than a year ago. The moderate rise, in dollar value, however, does not reflect the full GSA workload in operating the OCDM depot facilities. The inventory fluctuates constantly through in-and-out shipments of radiological instruments and receipt, assembly, and shipment of components of 200-bed emergency hospital units. During the past year radiological instruments were assembled into kits for shipment to 3,000 high schools for training science students. In addition, 400 complete hospital units were assembled and shipped to prepositioning sites.

Under the OCDM program for prepositioning medical supplies and equipment for immediate use in event of enemy attack or major natural disaster, 200-bed hospital units are stored at local communities under control of local civil-defense officials. In accordance with OCDM agreements with the several States, responsibility for care and maintenance was to be assumed by each State. These units

require periodic servicing to assure usefulness at any moment. OCDM officials determined that State maintenance programs were inadequate or nonexistent. Consequently, many hospital units were potentially unusable because of deterioration of the generator components which are designed to supply emergency electric power for hospital equipment and lighting systems. OCDM requested that GSA undertake a program for inspection and reconditioning of selected hospital units. For this purpose, special portable equipment was designed, and mobile maintenance crews were organized from GSA–OCDM warehouse employees. These crews visited 163 communities in 21 States, inspecting the site, storage conditions, and readiness potential of each hospital unit.

The generators were unpacked, tested, reconditioned to the extent necessary, and repacked in sealed containers to provide moisture-free, long-term storage. To simplify local inspection, visible cards impregnated with chemicals reacting to moisture by color change, were incorporated into each repacked container. Approximately 10 percent of the units inspected will require reshipment to a GSA–OCDM warehouse for major overhaul.

Another major activity was the reprocessing of outdated dried blood plasma. Almost 700,000 units of blood plasma were shipped to laboratories for conversion to liquid serum albumin, which will be returned from the laboratories starting in October. Unlike the dry form, the liquid serum will require refrigeration, and an additional 17,000 cubic feet of refrigeration space will be needed.

Participation and support of the special depot programs have been financed by an annual advance of funds from OCDM. For fiscal year 1959, GSA was advanced $2.2 million for emergency supplies and equipment stockpile operations. A similar amount is to be provided by OCDM for fiscal year 1960.

## PRODUCTION PROGRAMS

### *National stockpile*

The stockpile was established to provide strategic and critical materials to meet essential requirements in time of national emergency. GSA acquires materials for the stockpile and is responsible for the storage and maintenance of stockpile inventories under directives and policy determinations of OCDM. At the end of June 1959 the list of strategic and critical materials covered 73 metals, minerals, ores, and agricultural commodities. Early in July, 2 materials were restored to the list, bringing the total to 75.

The basic and maximum objectives for these materials are established by OCDM to provide for a 3-year emergency period. The basic objectives assume overseas imports factored to reflect estimated supply risks, but in calculating the maximum objectives supplies are limited to North American or equally accessible sources.

*Purchase, storage, and contractual obligations relating to materials.*—The inventory of strategic and critical materials on June 30, 1959, consisted of $8,296.6 million worth of materials, at acquisition cost, including the national stockpile ($6,216.2 million), Defense Production Act ($1,368.2 million), supplemental stockpile ($604.2 million), CCC barter program ($98.5 million), and Federal Facilities Corporation ($9.5 million) inventories. Obligations for the strategic and critical materials stockpile program and a summary of availability of funds, are shown in the tables below.

***Obligations for the strategic and critical materials stockpile program, fiscal year 1959 and cumulative through June 30, 1959***

[In thousands]

| Item | Fiscal year 1959 | Cumulative through June 30, 1959 |
|---|---|---|
| Materials acquisition | 26,574 | $5,443,142 |
| Rotation | 47,680 | 608,397 |
| Storage and handling | 20,009 | 172,103 |
| Administrative and operating | 3,348 | 39,934 |
| Warehouse, construction | 3 | 43,773 |
| Subtotal | 77,614 | 6,307,259 |
| Less reimbursements | 38,903 | 541,218 |
| Total obligations | 38,711 | 5,766,041 |

*Summary of availability of funds, as of June 30, 1959*

[In thousands]

| Item: | Amount |
|---|---|
| Public Law 117 (76th Cong.) | $70,000 |
| Public Law 520 (79th Cong.) | 5,804,412 |
| Total available | 5,874,412 |
| Net obligations | 5,766,041 |
| Unobligated balance | 108,371 |

*Materials expansion*

The programs certified by OCDM to GSA for administration under the Defense Production Act have been undertaken to encourage the expansion of productive capacity and supply of materials. Included are (1) expansion contracts to increase the mining and/or refining capacity for materials such as aluminum, copper, fluorspar, lead, molybdenum, nickel, and titanium; (2) research contracts for the development of new or improved processes to produce material more economically or efficiently and for the development of new sources of supply including substitute or synthetic materials; (3) domestic purchase programs to encourage expansion of domestic production of materials by small producers; and (4) operation of the Government-owned plant in Oriente Province, Cuba, for the production of Nicaro nickel.

*Expansion programs certified to GSA by OCDM.*—Metals, minerals, and machine tool programs certified to GSA totaled $7,646.9 million in gross transactions as of June 30, 1959. The "Report on Borrowing Authority," prepared pursuant to section 304(b) of the Defense Production Act, as amended, presents in detail the working capital and probable ultimate net cost (PUNC) certifications for these programs.

GSA received no new program certifications during fiscal year 1959 nor any substantive changes in existing programs. A number of changes were made in the borrowing authority provisions of existing program certificates to reflect the changing economic situation for individual commodity programs. Estimates of borrowing authority requirements increased significantly for aluminum, bauxite, cobalt, metallurgical manganese, mica, and nickel. An increase in borrowing authority requirements was necessary also to cover custodial, Treasury interest, and administrative expenses for the ensuing fiscal year. The estimate of borrowing authority required for the copper program was reduced substantially.

*Income and expense under the Defense Production Act.*—Operations of GSA under section 303 of the Defense Production Act of 1950, as amended, resulted in a net loss of $51 million from all activities during fiscal year 1959, compared with $33 million loss the previous year.

*Machine tools*

A reserve of machine tools and industrial manufacturing equipment is maintained under the National Industrial Reserve Act of 1948. This reserve is to supply essential needs of the Armed Forces and defense-supporting industries.

Programs to assure an adequate supply of machine tools to effect rapid industrial mobilization in an emergency are also administered by GSA, as certified by the OCDM, under the Defense Production Act.

## SUMMARY OF THE EFFECTIVENESS OF THE PROGRAMS

*National stockpile*

Strategic stockpile reserves of the 73 materials on the stockpiling list as of June 30, 1959, substantially equaled or exceeded maximum objectives for 50 materials and basic objectives for 13 additional materials.

During the year, stockpile procurement was limited to amosite asbestos, small diamond dies, jewel bearings, and muscovite block and film mica. By the end of the year, purchases of block and film mica were curtailed because of revised objectives. On July 1, all importers having stockpile contracts for foreign mica were notified that no extensions of delivery periods would be granted. Contracts were entered into for the upgrading of Government-owned materials in the stockpile to the higher-use forms of oxygen-free copper, tungsten carbide powder, ferrovanadium, molybdic oxide, and ferromolybdenum. These

readily usable forms will be returned to the strategic stockpile when processing has been accomplished.

In line with reduced stockpile requirements in fiscal year 1959, GSA lowered the Government's exposure in the amount of $2.6 million by cancellation of existing stockpile contracts. These cancellations and others in fiscal year 1958 brought the Government's exposure down by $45.6 million in 2 years.

*Materials expansion*

Expansion contracts executed by GSA in accordance with programs certified by OCDM have effected substantial production increases necessary to meet expansion goals. As a result of such contracts, expanded productive capacity will be available during an emergency for the production of such major metals as aluminum, copper, molybdenum, nickel, and titanium.

Research contracts, with other Government agencies and private research organizations, which GSA has administered, have covered such materials as manganese, natural and synthetic mica, nickel, selenium, and titanium. The National Bureau of Standards, under its contract with GSA, has established standards for titanium sponge and some alloys. The Bureau of Mines, under another research contract for electrorefining of titanium, has produced material with an average Brinell hardness of 80. The National Research Corp. has completed the construction of an explosion-proof skull type furnace for melting titanium and for scrap recovery and preliminary test runs have been started. The synthetic mica research program continues with three contracts with private concerns and two with other Government agencies still in effect. The National Bureau of Standards is developing basic data on the bonding forces in mica which may have an important bearing in the rebonding of synthetic mica flakes. The other four contractors are working on production of bonded and recrystallized sheets.

Program goals have been met for the domestic purchase programs for asbestos; columbium-tantalum; manganese at Butte-Philipsburg (Mont.), Deming (N. Mex.), and Wenden( Ariz.); mercury; and tungsten. At the end of the fiscal year, the beryl, carlot manganese, and mica programs remained open. The mercury program was completed in December 1958 and the domestic carlot manganese program which reached its quantity limitation on August 5, 1959, was terminated on that date.

Because of the revised determination of stockpile requirements, all importers holding long-term DPA contracts for foreign mica were notified in July that these contracts, which were scheduled to expire June 30, 1962, will be terminated effective June 30, 1960.

In fiscal year 1959, the Government's exposure under Defense Production Act contracts has been reduced in the amount of $25.0 million, for a total of $252.9 million in 2 years.

*Foreclosure action.*—The foreclosure sale of the Mid-Continent Mining Corp. was confirmed and the assets of same were sold under execution issued by the U.S. district court, Western District of Missouri, to satisfy the judgment in favor of the Government foreclosing the Government's mortgage. Net recovery by GSA as a result of the foreclosure was $43,901.88.

*Machine tools*

Machine tools in the national industrial equipment reserve made a significant contribution to defense-supporting producers during the Korean emergency. Since that time, the reserve has been strengthened both in quality and number of items.

The Defense Production Act pool order and tool lease programs undertaken during the Korean emergency to increase the production of machine tools were successful to the extent that annual production increased from $350 million to $1,250 million.

A lack of facilities for the production of extremely large machine tools has hampered previous defense efforts. The elephant machine tool program currently in force now assures an availability of such facilities for a 10-year period.

A standby pool order program guarantees that there will be no lack in production expansion should another emergency require it. M-day machine tool program which OCDM has certified to GSA is a standby program under the Defense Production Act to make possible immediate use of machine tool productive capacity in the event of an emergency. At the end of fiscal year 1959, a total of 84 contracts for 14,675 items costing $220 million had been accepted by the Government. There will be no actual production, advances or expenditures under this program until the Government notifies producers.

Recently OCDM, at the recommendation of GSA, authorized the declaring excess of all idle machine tools acquired under the various Defense Production Act programs. This action was taken with the expectation that a substantial number of the excess tools will be selected for current military production or inclusion in the national industrial equipment reserve. A considerable portion of the remainder is expected to be selected by educational institutions under the Department of Health, Education, and Welfare educational program. Present indications are that only 160 of the approximately 700 items involved will be offered for sale as surplus property. This action assures the retention of items required for future emergencies as well as full utilization of those suitable for other programs.

*Operation of Government-owned plant*

The Nicaro nickel plant in Cuba during the past fiscal year operated at about two-thirds of full capacity and produced 35.7 million pounds of nickel plus cobalt in powder and sinter oxide forms. In the 7 years that this plant has been in continuous operation, a total of 240 million pounds has been produced and 197.5 million pounds of this quantity has been sold to industry and the national stockpile. At the end of the year, the remaining inventory represented an investment, at cost, of $21.9 million.

Sales of Nicaro products for the year ending June 30, 1959, amounted to 29.4 million pounds for about $20.5 million, as compared with sales of 20.8 million pounds for $14.8 million in fiscal year 1958. Nicaro's profit on sales during the year amounted to $5.5 million, compared with $3.5 million in fiscal year 1958.

Sales have fallen off substantially in both June and July, first as a result of the anticipation of a steel strike and later because of the actual strike. July sales amounted to only 10 percent of those made in preceding months.

In December 1958 the Crum Lynne, Pa., refinery for the conversion of nickel oxide to metallic nickel was closed down due to the inability to sell nickel metal in competition with the plentiful supply of higher purity metallic nickel available at the same price. During its 2½-year operation, the Crum Lynne plant produced about 40 million pounds of metallic nickel pigs and ingots.

*Dispersal of facilities*

Determinations were received by GSA during the year on five facilities to be constructed and leased to the Government for air-route traffic centers that will be operated by the Civil Aeronautics Administration (now part of the Federal Aviation Agency). The Administrator of Civil Aeronautics certified that the traffic centers should be at dispersed locations as follows:

| Area: | *Site location* |
|---|---|
| New York, N.Y. | Sayville, N.Y. |
| Jacksonville, Fla. | Baldwin, Fla. |
| Albuquerque, N. Mex. | North of Albuquerque, outside the target area |
| Cleveland, Ohio | Oberlin, Ohio. |
| Oakland, Calif. | Outside the target area. |

*Protective construction.*—At the request of OCDM a study was conducted by the GSA Public Buildings Service in its regional offices to determine the feasibility of incorporating fallout shelter in existing buildings. One building in each region was evaluated and it was determined that it would be feasible from a structural standpoint to develop fallout shelter in such buildings. A complete report was made to OCDM. This report indicated a wide variation in estimated costs in the various buildings, and that in most cases the space selected for the study was occupied and in full use.

The GSA initiated a contract for the development of tentative plans and specifications in sufficient detail to provide a cost estimate for a fully protected OCDM regional underground structure.

A study for the conversion of garage space in the addition to the State Department building to fallout shelter was completed, and the results were forwarded to the State Department for appropriate decision.

A program was initiated during the year for the preparation of alternative drawings for incorporation of fallout shelters in Federal buildings to be constructed. This program is in accordance with policies established by OCDM in a letter dated February 4, 1959, to all departments and agencies.

*Self-protection.*—FCDA Advisory Bulletin 185 designated GSA to administer facility self-protection programs, with certain exceptions, in all federally owned or leased facilities. A handbook entitled "Building Organization for Self-Pro-

tection" has been prepared for use by Federal agencies. The handbook outlines the steps for setting up building organizations to protect life and property from the effects of attack, fire, flood, earthquake, serious weather disturbances, or other major catastrophes, and to prevent or minimize injury and damage. The handbook will be published at an early date.

*Warning systems.*—Upon request of OCDM, GSA completed the installation of the Washington, D.C., metropolitan area warning system and established a contract for the maintenance of the system.

*Financial assistance*

Government financial assistance has continued to be available to defense contractors. A summary of these programs relating to accelerated tax amortization, and to loans and advances administered by GSA, is noted below.

*Accelerated tax amortization.*—During the year no certificates of necessity for metals and minerals expansion programs (in connection with which GSA makes recommendations to OCDM) were issued by OCDM.

Applications for amendments to tax amortization certificates were reviewed in light of performance to date on the various projects. Time extensions were recommended to OCDM in two cases. Scope amendments were recommended on seven other projects, indicating final total costs in excess of $240 million.

*Advances.*—Advances for minerals and metals expansion were increased during the year by $13 million. However, there was no change in the total advances made for machine tool programs. Total advances for minerals and metals programs and for machine tools totaled $214.9 million at the end of June 1958 and had increased to $227.9 million at the end of June 1959.

Repayments by contractors of advances made to them totaled $214.4 million at the end of June 1959, compared with $191 million repaid through the end of June 1958, or an increase of $23.4 million for the year. The balance outstanding at the end of June 1959 was $8.4 million, compared with $21.9 million at the end of fiscal year 1958.

*Advances to contractors for minerals expansion projects and machine tools as of June 30, 1959*

| Status | Total | Mineral projects | Machine tools |
|---|---|---|---|
| Disbursed | $227,916,702 | $174,135,000 | $53,781,702 |
| Repaid | 214,389,798 | 160,774,182 | 53,615,616 |
| Written off | 5,117,338 | 4,951,252 | 166,086 |
| Outstanding | 8,409,566 | 8,409,566 | 0 |

*Government loans.*—No new loans for materials expansion projects were made by either the Export-Import Bank of Washington or the Defense Lending Division, Department of the Treasury (formerly Reconstruction Finance Corporation), during fiscal year 1959 on the basis of certificates of essentiality from GSA. No certificate of essentiality was issued by GSA during the period for loans under a section 302 of the Defense Production Act.

*Guaranteed loans.*—Under authority of section 301 of the Defense Production Act of 1950, as amended, GSA guarantees loans for contractors under minerals and machine tool programs. During the year there were no new GSA loan guarantees.

Five GSA loan guarantees were outstanding at the end of the 1959 fiscal year, under which borrowers could obtain up to $43.6 million. Loans outstanding totaled $43.4 million. GSA's guarantee liability on the outstanding loans amounted to $41.3 million.

## CURRENT NEED FOR THE PROGRAMS

Determination of the current need for mobilization programs is the responsibility of OCDM. The national stockpile continues to be a major element of our materials preparedness program. In accordance with a policy established by OCDM on June 30, 1958, stockpile planning now assumes a 3-year emergency rather than the previous 5-year period. OCDM continues its review of stockpile objectives on this basis.

SUMMARY OF THE PROGRAMS AS RELATED TO SMALL BUSINESS

*GSA support to OCDM emergency supplies and equipment program*

GSA administers for OCDM a number of procurement contract for supplies and equipment under this civil defense program. The dollar volume of such contracts is heavily concentrated on radiological instruments. It is the policy of GSA in coordination with the Small Business Administration to channel, whenever feasible, procurement of these instruments to small firms capable of meeting requirements.

*National stockpile*

Many of the materials acquired under the Stragetic and Critical Materials Stockpiling Act are purchased from small producers. Most of the participants under the domestic program for chrome ore and concentrates, which was established under the act, were small producers.

Small firms participate to a great extent in the rotation programs for materials such as rubber and cordage fiber. Contracts for related activities such as inspection, testing, and maintenance services are made with small business.

*Materials expansion*

*Domestic minerals purchase programs.*—The GSA purchase programs for expansion of domestic production under the Defense Production Act have encouraged participation by small producers. During the year under review these programs covered beryl, manganese, mercury, and mica. The mercury program closed in December 1958 and manganese was approaching its program limitation by the end of the fiscal year. Programs previously initiated and now completed covered asbestos, columbium-tantalum, and tungsten.

The terms and conditions of these programs have been designed to attract and encourage participation of small business. The Government agrees to buy, over a definite period of time or for a stated total tonnage, at fixed prices generally above the market price, production offered which meet specifications. These programs have made it possible for many small producers, who otherwise would not be in production, to participate.

In addition, a revision to the mica regulation has been issued during the past year which was designed to assist the small producers of mica and under which the pricing method is even more favorable to the miner than in the past.

*Independently owned metal fabricators.*—In its contracts under the Defense Production Act for the expansion of production facilities for primary materials, GSA has made provision for mandatory allocation of a portion of the expanded aluminum production for distribution to nonintegrated or independently owned fabricators. Every effort has been made to assure small business a substantial share of such material.

*Machine tools.*—Most manufacturers of machine tools are small business concerns. A number of programs under the Defense Production Act have been designed to stimulate this production so vital to defense production. These programs have been administered by GSA.

MAJOR PROBLEMS

The problems confronting GSA are those of administering its several mobilization programs within the policies established and directives received from the responsible agency.

*Preservation of essential records.*—The chief problem encountered is the lack of information on objectives of the vital records programs and the lack of specific agency criteria for the determination of vital functions. This is particularly true in field activities where very little information is available. The directives outlining the vital records program need to be brought up to date.

Prepositioned copies of the "Code of Emergency Federal Regulations" will be of little value unless they include all major orders and regulations necessary to the continuance of Government during a period of national disaster.

*National stockpile.*—A continuing problem is the long-term maintenance and management of strategic and critical materials in the national stockpile and other inventories, as well as machine tools in the custody of GSA.

Another problem area concerns the materials that are no longer required to meet stockpile objectives. During the past year GSA has been reviewing such materials, particularly those not meeting stockpile specifications. As a result,

OCDM has authorized the disposal of specific quantities of 41 materials totaling approximately 716,000 tons.

*Protective construction.*—Lack of funds has precluded the carrying out of certain desirable programs in the protective-construction activity as well as providing protected working space at relocation sites. The absence of a clear definition of program for headquarters and regional relocation has to some extent hindered the development of clear-cut programs.

### SUMMARY OF STANDBY PROGRAMS FOR ANY FUTURE EMERGENCY

*M-day machine tool pool program.*—This is a standby program certified to GSA by OCDM under the Defense Production Act. It would assure immediate use of machine tool productive capacity in the event of an emergency, to avoid the usual time lag in providing machine tools necessary to make end-use items.

*Inventories of materials and equipment.*—All strategic and critical materials and industrial equipment in inventories in the custody of GSA are maintained so that they will be available for immediate military and essential civilian requirements in an emergency. In addition, GSA will be in a position to undertake purchase programs including preclusive buying of strategic and critical materials if an emergency should make it necessary.

### CHANGES IN ORGANIZATION

Responsibility for direction of the Government-owned facility at Nicaro in Oriente Province, Cuba, was transferred from the Special Assistant to the Administrator, to the Commissioner, Defense Materials Service, on July 7, 1959. Accordingly, Delegation of Authority No. 336 published in the Federal Register of May 3, 1958 (23 F.R. 2996) was canceled.

### FUTURE OBJECTIVES

The future objectives in administration of mobilization programs in GSA are for the most part determined by the policy guidance received from other Government agencies. With reference to the substantial inventories within GSA's immediate control, the objectives are to direct intensive and coordinated efforts toward their efficient and economical maintenance and management. These inventories must be readily available for use in a national emergency. In addition, the conduct of purchase and other programs will be as authorized.

***Availability of funds for defense needs—Allocation, certification, and balance of borrowing authority available under the Defense Production Act as of June 30, 1959***

[In thousands]

| Agency | Allocations and reserves | Certification | | Balance available for program |
|---|---|---|---|---|
| | | Working capital | Probable ultimate net cost | |
| Under sec. 302: | | | | |
| Department of the Treasury | $165,000 | $165,000 | | |
| Export-Import Bank of Washington | 25,500 | 25,500 | | |
| Subtotal | 190,500 | 190,500 | | |
| Under sec. 303: | | | | |
| GSA | 1,804,000 | 783,193 | $1,020,807 | |
| Department of the Treasury | 1,600 | | 1,600 | |
| Department of the Interior | 35,800 | | 35,800 | |
| Department of Agriculture | 67,784 | | 67,784 | |
| Subtotal | 1,909,184 | 783,193 | 1,125,991 | |
| Total allocated | 2,099,684 | 973,693 | 1,125,991 | |
| Unallocated by OCDM | 316 | | | $316 |
| Total available for new programs | | | | 316 |
| Total borrowing authority | 2,100,000 | | | |

Of the $2,100 million in total borrowing authority under the Defense Production Act, $2,099.7 million has been allocated by OCDM as of June 30, 1959, as shown in the table above. Of the total amount allocated $1,804 million has been allocated to GSA. Of the total allocation to GSA, all of it has been certified.

*Utilization of authority to borrow from U.S. Treasury as of June 30, 1959*

[In thousands]

| Agency | Total borrowing authority allocation | Transaction with U.S. Treasury | | | Available for borrowing |
|---|---|---|---|---|---|
| | | Borrowed | Repaid | Balance outstanding | |
| GSA | $1,804,000 | $1,853,700 | $170,000 | $1,683,700 | $120,300 |
| Department of the Treasury (RFC) | 166,600 | 276,965 | 126,315 | 150,650 | 15,950 |
| Export-Import Bank | 25,500 | 52,952 | 28,185 | 24,767 | 733 |
| Department of Agriculture | 67,784 | 58,807 | | 58,807 | 8,977 |
| Department of the Interior | 35,800 | 32,000 | | 32,000 | 3,800 |
| OCDM Reserve | 316 | | | | 316 |
| Total | 2,100,000 | 2,274,424 | 324,500 | 1,949,924 | 150,076 |

MANNER IN WHICH GSA MOBILIZATION PROGRAMS FIT INTO A DEFENSE PLAN

Mobilization programs administered by GSA were established as an integral part of the overall mobilization plans and are geared to immediate availability of materials, industrial equipment, and productive facilities in event of a national emergency. With the exception of the National Industrial Reserve, which is administered in accordance with determinations of the Secretary of Defense, GSA mobilization programs are carried out under Executive orders and under directives from OCDM.

## DEFENSE DEPARTMENT

ASSISTANT SECRETARY OF DEFENSE,
*Washington, D.C., September 24, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Congress of the United States.*

DEAR MR. CHAIRMAN: As requested in your letter of August 10, 1959, addressed to the Honorable Neil H. McElroy, there is inclosed herewith a summary of the activities of the Department of Defense during the period September 1, 1958, through August 31, 1959, under the Defense Production Act of 1950, as amended.

Sincerely yours,

J. P. FALVEY,
*Deputy Assistant Secretary of Defense (Supply and Logistics).*

ACTIVITIES OF DEPARTMENT

Activities of the Department of Defense which are related to the provisions of the Defense Production Act of 1950, as amended, included the following, during the year ending August 31, 1959:

Priorities and allocations.
Expansion of production capacity and supply:
(*a*) Certificates of necessity.
(*b*) Guaranteed loans.
(*c*) Improvement of existing production capacity.
Assistance to small business firms.
Assistance in labor surplus areas.
Industry integration committee operations.
Industrial dispersion programs.
National mobilization program planning and mobilization material requirements.

PRIORITIES AND ALLOCATIONS

*Authority.*—The authority for the Department of Defense participation under title I of the Defense Production Act of 1950, as amended, stems from Executive Order 10480 and the issuance of delegation 1 by the Business and Defense Services Administration, which authorizes the Department of Defense to participate in the national priorities and allocations program in conformance with orders and regulations issued by the Business and Defense Services Administration. The Secretary of Defense, under revised Department of Defense Directive 4405.6, August 20, 1954, has delegated the priorities and allocations authority to the Assistant Secretary of Defense (Supply and Logistics) and the appropriate operational authority has been redelegated to the military departments and associated agencies.

*Summary of activities.*—Uniform policies relating to priorities and allocations matters within the DOD are developed by the Office of the Assistant Secretary of Defense (Supply and Logistics) and these policies, together with guidance and detailed instructions to all operating elements and associated agencies are disseminated through the DOD Priorities and Allocations Manual. Continuing liason is maintained with the civilian control agencies, Office of Civil and Defense Mobilization, and Business and Defense Services Administraton, for the purpose of recommending actions, participating in development and clearance of orders and regulations, and cooperating in the preparation and implementation of policies relating to requirements, production and distribution for approved military programs. Among the policies and procedures issued this year were those to implement: (1) the delegating of rating and allotment authority to NASA and FAA for selected programs; (2) the processing of requests for top national priority; (3) The expansion of the superindustrial priority program rating, established by BDSA as directed by OCDM, to give preference to deliveries in support of DOD and NASA contracts for space programs, in addition to ICBM/IRBM and the antiballistic missile weapon system including related early warning; (4) special assistance for urgent DOD programs during the current steel strike; and (5) the use of priorities and allocations in accordance with OCDM national plan for civil defense and defense mobilization, together with its annexes which are designed to capitalize on available production as soon as possible in the event of war.

The Supply and Logistics staff acts as the claimant agency for all elements of the Department of Defense and associated agencies under approved procurement programs. Activities include (1) issuing periodic requirements calls; (2) reviewing and consolidating requirements for submission to OCDM; (3) supporting the requirements before committees of OCDM when required; (4) receiving and distributing materials allocations; (5) preparing appeals for additional materials; and (6) arranging for transfers, adjustments and returns of materials.

Priorities and allocations functions performed by the Supply and Logistics staff are designed to keep current military production, construction and research and development programs on schedule and to maintain the national priorities system as a mobilization readiness measure. These functions include: (1) redelegating authority to the military departments and associated agencies; (2) preparing and issuing uniform policies and procedures to govern the use of this authority within the Department of Defense; (3) recommending special actions to expedite deliveries to fulfill defense orders; (4) resolving production and distribution conflicts within the Department of Defense; (5) maintaining consolidated controlled materials accounting controls; (6) recommending simplified procedures; and (7) participating with OCDM and BDSA in developing standby priorities and allocations systems for mobilization readiness.

The military departments continued to perform various activities in support of the priorities and allocations program to assure the fulfillment of military procurement programs and to provide for ready identification of military orders. These activities include: (1) assigning DO or DX preference ratings to military contracts and orders; (2) preparation of departmental statements of requirements; (3) authorizing production schedules and making controlled materials allotments; (4) administering special distribution controls; (5) obtaining special priorities assistance for individual DOD contractors experiencing production difficulties; (6) auditing operations of DOD military establishments and selected contractors for compliance with instructions and regulations; and (7) collaborating in the simplification of current and standby operating procedures.

*Program effectiveness.*—The priorities and allocations program continued its effectiveness in establishing and maintaining preferential treatment for the ac-

ceptance of defense orders; and provided adequate allocations of controlled materials for their fulfillment. In general, problems requiring assistance because of material shortages or difficulties were resolved more expeditiously as a result of the procedures in use. The program has been used effectively for current defense procurement and mobilization planning by the following: (1) production reserves (set-asides) were maintained for the acceptance of authorized controlled materials orders; (2) the DOD Priorities and Allocations Manual was maintained to provide uniform guidance to all agencies of the Department of Defense in the discharge of DOD responsibilities; (3) current DMS regulations have been redone by an interagency group into one simplified regulation which is ready for issuance by BDSA. This regulation greatly reduces the workload in industry but still retains the essential elements consistent with national policy which would insure industrial support of military programs in the event of full mobilization, and with modifications, would be used in the event of attack on the United States; (4) priorities support to cover materials for maintenance, repair and operating supplies and for installation of production equipment, was continued, but only for defense contractors; (5) certain electronic component and test equipment schedules were reviewed by DOD prior to issuance of delivery directives by BDSA to assure preference to defense orders; (6) an alphabetical and numerical preference list was maintained to assist industry and Government in scheduling orders for machine tools for most urgent military production; (7) implementation of the DOD urgencies system was continued, and the DOD mobilization master urgency list (M–MUL) for fiscal year 1959 was issued in September 1958. This list contains the minimum quantities of the most essential end items required from production to carry out assigned objectives under mobilization conditions for specific alternative conditions. The DOD master urgency list of the most important currently procured items and projects was also revised and reissued on April 7, 1959, and four supplemental changes have been made to provide continuing and up-to-date guidance; (8) work was continued with civilian agencies to simplify priorities and allocations procedures, and to adapt them for use under full mobilization.

During the year ending August 31, 1959, 1,745 cases requesting special assistance to obtain materials, components, end items, and production equipment to fulfill military contracts were processed. The assistance that has been given in the past year has supported the DOD approved programs.

DOD requirements for controlled materials were computed each quarter. The general magnitude of the requirements remained about level through the year. It was necessary to revise the instructions for computing these data because of changes anticipated in the definitions of certain controlled materials under the amended DMS Reg 1.

### EXPANSION OF PRODUCTION CAPACITY AND SUPPLY

#### (a) *Certificates of necessity*

*Authority.*—The Department of Defense participates in the accelerated amortization program by reviewing and making recommendations on applications for certificates of necessity which involve expansion of industrial capacity regarded by OCDM as being important in the support of the DOD program. The authority for this activity is contained in Executive Order 10480, section 168 of the Internal Revenue Code of 1954, as amended, and OCDM Regulation 1B. This activity supplements title III of the Defense Production Act, as amended.

*Summary of activities.*—Applications for tax amortization show a balance on hand in the Department of Defense of 93 as of August 31, 1959. During the period September 1, 1958, through August 31, 1959, OCDM referred 216 applications for necessity certificates to the Department of Defense for comments and recommendations. There were no cases on which waiver of dispersion criteria was recommended. The Department of Defense furnished comments and recommendations on 289 cases during the same period.

*Program effectiveness.*—While the volume of cases has not been particularly large under the restricted criteria of the OCDM Regulation 1B, the certificates issued have generally been related to the most important of the defense programs and have been principally research, development and test related. OCDM reported issuance of 130 certificates valued at $108,358,000 during the fiscal year 1959. The Department of Defense recommended extension of the rapid tax amortization provisions beyond December 31, 1959 expiration date.

*(b) Guaranteed loans*

*Authority.*—The Department of Defense participates in the guaranteed loans program under title III of the Defense Production Act of 1950, as amended, and authority delegated to the Department under Executive Order 10480.

*Summary of activities, year ending July 31, 1959*

[Amount in millions]

| Status of application | Number | Amount of loan | Amount of guarantee |
|---|---|---|---|
| Pending as of July 31, 1958 | 5 | $9.7 | $6.6 |
| Received | 35 | 132.9 | 97.8 |
| Authorized | 34 | 136.3 | 99.4 |
| Declined | 3 | 1.0 | .9 |
| Pending as of July 31, 1959 | 3 | 4.8 | 4.1 |

*Applications authorized, year ending July 31, 1959*

| *Size of loan* | *Number* |
|---|---|
| Total | 34 |
| $50,000 and under | 1 |
| $50,001 to $100,000 | 2 |
| $100,001 to $300,000 | 12 |
| $300,001 to $500,000 | 0 |
| $500,001 to $1,000,000 | 7 |
| $1,000,001 to $2,500,000 | 4 |
| $2,500,001 to $5,000,000 | 1 |
| $5,000,001 to $10,000,000 | 4 |
| $10,000,001 to $15,000,000 | 1 |
| $15,000,001 to $50,000,000 | 2 |

*(c) Utilization and improvement of existing production capacity*

*Authority.*—Department of Defense activities related to title III of the Defense Production Act of 1950, as amended, also include development and use of methods and procedures to utilize and improve existing production capacity.

*Summary of activities: Machine tools.*—The annual alphabetical and numerical preference list of Department of Defense contractors was maintained. The list, together with the interim changes, provides a means of channeling distribution of new metalworking equipment to producers of the most urgent military items in accordance with provisions of BDSA order M–41, as amended. Specific contractors (with contract numbers indicated) are arranged both numerically and alphabetically on the list which is issued jointly by Department of Defense and the Business and Defense Services Administration to several hundred machine tool builders as a guide in scheduling deliveries. The Department of Defense continued its participation with Business and Defense Services Administration to obtain production equipment by directive and diversion action in order to expedite production of high-urgency military production and construction programs.

*Redistribution of idle DOD production equipment.*—The production equipment redistribution group (PERG) maintains a central and current listing of idle military-owned and controlled machine tools and certain other items of related production equipment reported to the group by the Departments of the Army, Navy, and Air Force. Similarly, the General Services Administration also reports to PERG the same classes of items which have been selected previously by the Office of the Assistant Secretary of Defense (Supply and Logistics from the Armed Forces Supply Support Center excess property listings and which comprise the national industrial equipment reserve (NIER).

In addition to its providing a nucleus of operable metalworking machinery for immediate use at mobilization, this equipment may be allocated and redistributed to qualified users currently engaged in either direct military or defense-supporting production under criteria established for that purpose. During the period beginning September 1, 1958, through August 31, 1959, more than 6,200 items from this inventory were supplied to equipment users in these categories. At the close of this reporting period, the quantity of idle production

equipment listed in the production equipment redistribution inventory (PERI) amounted to approximately 85,000 items.

*Inspection of machine tool storage sites.*—The inspection of production equipment activities at the various military and NIER storage sites is a continuing program. Its purpose is (1) to check the adequacy and accuracy of inventory records, (2) to determine the degree of compliance with current DOD policies, directives, and instructions dealing with this subject, and (3) to ascertain the extent and efficiency of machine-tool maintenance. On the basis of the installations visited, it was noted that generally conditions were either satisfactory or had shown marked improvement. In a few instances involving discrepancies in records or when maintenance standards or other conditions were not satisfactory, the military departments were advised accordingly and action was taken to correct the conditions completely or at least to the extent of funds available. In general, however, records and machine-tool maintenance were found to be very good.

*Uniform property management records.*—In order to make possible a single property manager in plants where two or more military departments have contracts, it is considered necessary to utilize, by all three military departments, a single and uniform property record form. The subcommittee of the Armed Forces Procurement Committee on Single Property Management directed that a task group be established to develop a format for this purpose. The major portion of the property involved is production equipment. The achievement of this objective was divided into the following chronological approach:

1. A review of all existing property management record forms and the consolidation of their essential features into a single list of entries.
2. The adaptation of a form both to contain these entries and which would be suitable for use in connection with electrical accounting machines as well as automatic data processing machines.
3. The development of uniform written procedures for the completion and use of new form.

In May 1959, the task group met for the first time at the Army Production Equipment Agency at Rock Island, Ill. All property management forms presently in use were reviewed and agreement was reached concerning what items were to be included in the new form. In June, the task group met again, in Washington, at which time a preliminary layout of the form was agreed upon. Certain revisions were made as a result of consultations with specialists in mechanical or electronic data processing. A third meeting was held at Rock Island Arsenal where tentative agreement was reached concerning both content and format of the record form. Instructions for their application and use have been written and at the present time are being coordinated with the three military departments. Subsequently, it is planned that this matter will be incorporated int othe armed services procurement regulation.

*Tools for schools program.*—For quite some time in the past, there has been considerable interest shown concerning the desirability of utilizing idle Government-owned machine tools in vocational and industrial training institutions. The assumption was that such a program would create a source of technically trained personnel to meet current industry needs. This would have a beneficial effect upon those local economies where shortages exist for people possessing these talents and skills. Moreover, and perhaps even to a greater degree, was the consideration that a program of this nature would be of national benefit in that it would provide a nucleus and reserve of manpower trained in up-to-date machine shop practices which would be available immediately in time of mobilization or other critical national emergency involving the safety and defense of the United States of America.

Public Law 883, enacted during the 80th Congress, stipulates, among other things, that in the interest of national security, the Secretary of Defense may authorize and regulate the lending of property in the NIER to any nonprofit educational institution or training school when he has determined (1) that the program for which the equipment is required will contribute materially to the national defense, and (2) that the institution or school agrees to both maintain the equipment in a manner satisfactory to the Secretary and will, upon demand, return it to the Government without cost to the Government.

The first application for such a loan, under this provision of the law, was received by the Department of Defense in October 1958 and was submitted by the North Carolina State Board of Education in behalf of the Winston-Salem Forsyth County Industrial Education Center. The purpose of this loan was to

equip this educational center, in its entirety, with the machine tools necessary for its training curriculum. Actually, at that time, this educational center was more or less in the planning stage although the plans were firm and construction of the facilities imminent. The Governor of North Carolina and also representatives of industry in that State supported this request for the loan of NIER equipment. In addition, several Federal agencies in Washington lent their support to this program and urged the approval of the request.

After a thorough study, the North Carolina request was approved and it was determined that the necessary equipment would be loaned to the Winston-Salem Forsyth County Industrial Education Center.

At this writing, the construction of the facilities at this educational center is nearing completion and the negotiations with respect to the loan agreement between GSA, the custodial agency for the NIER, and the educational center have been consummated. The North Carolina representatives have selected the machine tools necessary to equip their facility and as soon as it is completed, shipment of the tools will be accomplished.

Some of the benefits which will accrue as a result of this loan are (1) the development of technically trained individuals whose services can be utilized readily by those technical industries already located in the area and which are engaged in defense work, (2) a reserve of skilled labor familiar with modern machine shop practices which would be of unlimited value in the event of mobilization, (3) the retention of a reserve of Government-owned machine tools and related production equipment on a dispersed basis, thereby minimizing heavy concentrations of such items at strategically vulnerable points, and (4) a saving to the Government of processing, storage, and maintenance costs since under the terms of this loan, the borrower of the equipment will bear these expenses.

Since this is the first such loan to be considered under this legislation periodic inspections by DOD representatives will be made to assure proper equipment utilization and the program as a whole will be studied to measure carefully the benefits to national defense before other approvals of other similar requests are granted.

*Component capacity.*—The OCDM-sponsored interagency program for requirements versus capacity study of 65 component areas was formally discontinued since the military requirements, under the new planning concept, were reduced to such an extent that most of the shortages, or indicated shortages, disappeared. There are six remaining areas where deficiencies were uncovered which still warrant surveillance. Three of these are ship components, and final resolution depends on the recomputation of requirements by the Maritime Administration.

The Department of Defense continues to maintain surveillance to assure that developing capacity problems for specific components are identified at the earliest possible stage. They are studied on an informal basis by staff of the agencies concerned, under the guidance of OCDM. Steps are being taken to conclude the studies already initiated, as data becomes available on which to base revised requirements. For example, in the case of jewel bearings, the Department of Commerce (BDSA) is obtaining specific data on bearing usage which can be related by the military departments to end item schedules in estimating requirements for a limited or general war.

The Department of Defense has issued military standards for instrument jewel bearings. It is intended that all future military procurement of items containing jewel bearings will specify that such bearings will conform to military standards. In view of this, OCDM revised its stockpile objective to acquire jewel bearings to conform to the standards. Production of these bearings at the Rolla facility for the stockpile will be diverted as necessary to fill current purchase orders extended by military contractors. This, in effect, will provide the Rolla facility with off-the-shelf inventories to meet military contractors' demands; will maintain current production capabilities on the most important bearings; and will reduce deliveries to the national stockpile.

Based on a forecast of military production demands on the transistor manufacturing industry, it appeared likely that the expected supply would fall seriously short of demand in 1960, 1961, and 1962.

In an effort to prevent this shortage from occurring, the Office of the Assistant Secretary of Defense (Supply and Logistics), in cooperation with BDSA, conducted a study to determine the specific types and quantities of transistors that will be needed for the most vital military weapons production.

During the course of the study, the production plan for the Nike-Zeus was postponed. The result was a significant reduction in the expected military tran-

sistors requirement. The study was completed and indicated that the current trend of expansion in the transistors industry, which is taking place without Government assistance, should be adequate to meet essential military demands during 1960, 1961, and 1962.

*Planning with industry.*—DOD Instruction 4005.15 was issued on July 14, 1959. This instruction abolishes the production allocation program which had been in effect since March 1950, and establishes the industrial readiness planning program in its place. Under the new program, the military departments are provided with a variety of planning systems which are suited to the various categories of items for which planning is necessary. With appropriate matching of systems to items, maximum planning benefits should derive from minimum effort.

Provision has been made in the new instruction to accommodate planning for essential civilian and survival items under the guidance of OCDM by utilizing the military planning organization to coordinate anticipated emergency procurements by both military and civilian agencies at the plant level.

OCDM and BDSA are formulating a program to take advantage of this opportunity to integrate planning for essential civilian needs with military production.

*Industry essentiality studies.*—The Department of Defense has completed studies and established a position with the Director, Office of Civil and Defense Mobilization, under section 8, Trade Agreements Extension Act of 1958, on the heavy power generating equipment industry, including hydroturbine, hydroturbine generator and transformer industries, and on the fluorspar industry.

The Director of OCDM has announced his decision on the heavy power generating equipment industry, but has not yet decided on the fluorspar industry.

Studies are now underway in the Department of Defense to establish essentiality positions on wool knit gloves, steam turbine generating equipment, and small arms manufacturing, as requested by the Director.

*Propellent program.*—The Defense Production Act and related authorities were used as appropriate to further the propellent program.

Propellent chemistry research: Activities in propellent chemistry research have the objective of the discovery of new chemical combinations capable of producting greater rocket thrust; the development of practical methods of synthesis; and the techniques required to utilize these materials in high efficiency solid propellants. The initial goal is to conduct research leading to new ingredients for fuels, oxidizers, and binders.

Research in each of these areas is largely competitive in nature. The Government is utilizing the competence and resources of several large chemical concerns where a broad integrated research and development program can be effectively carried out. Special laboratories, universities, and research foundations are being used. In addition, Government laboratories contribute to the advancement of research in this area.

Solid propellent production effort: It is apparent from various degrees of interest being placed upon the use of solid propellent motors for propulsion of our advanced weapons, that many potential advantages are to be achieved: namely, simplicity, high reliability, quick reaction, minimum ground support and base facilities, and safe to handle for operational use.

Production facilities for large grain engines (8,000 pounds and up) are nonexistent or very limited and, therefore, have to be fostered. Although private ventures into the solid propellent area were initiated with modest outlays of private capital, heavy support from military agencies and their weapon system prime contractors has encouraged the industry to undertake extensive expansion. This not only included expansion in solid propellent materials but also into the fabrication processes, technical know-how, and development, and also in the areas of hardware and related equipment. The proportionate outlays of Government funds and private capital for facilities as of the end of the year 1958 totaled approximately $70 million, of which 54 percent represents Government and 46 percent industry.

Solid propellent facilities, including buildings and equipment, are expensive. Since the only customer for the products from solid propellent plants is, in the final analysis, the U.S. Government, industry management generally asks

that all required facilities be Government furnished. However, the military agencies, backed by the armed services procurement regulations, usually insist that brick and mortar (nonseverable) facilities items be company furnished and, further, that equipment (severable) not categorized as "special purpose equipment" also be furnished by the company.

In many of the cases where a considerable amount of company capital is involved, the companies seek to ease the burden by applying for short-term tax amortization from OCDM. Aerojet-General, Thiokol Chemical, Olin-Mathieson, Hercules Powder Co., and Metallurgical, Inc., are some of the companies who have been beneficiaries of tax amortization for company-financed solid propellent facilities.

### ASSISTANCE TO SMALL BUSINESS FIRMS

*Authority.*—The small business program is conducted under provisions of title 10, United States Code, chaper 137; the Small Business Act of 1953, as amended (recently enacted as permanent legislation, Public Law 85–536); and the Defense Production Act of 1950, as amended.

*Summary of activities.*—During the fiscal year 1959 the Department of Defense continued to carry on an active and vigorous program seeking to assure that small business concerns were given an equitable opportunity to compete for defense business and to encourage to the greatest possible extent increased participation by small business firms in military procurement.

Small business specialists in the major procurement offices and contracting offices throughout the procurement organization concentrated on assisting small business by actively searching for new sources; by including in military bidders' mailing lists the names of established small business suppliers and such potential suppliers as have made acceptable application for inclusion in bidders' lists; by soliciting bids from a proportionate number of small firms in all cases where the entire bidders' list was not being solicited; by planning procurement in reasonably small, economically sound production lots, allowing sufficient time for the preparation and submission of bids and establishing favorable delivery schedules, specifications, and other provisions consistent with military requirements; by providing to the maximum possible extent opportunities to submit bids for quantities less than the total procurement requirement; by encouraging prime contractors to participate in the defense small business subcontracting programs; and, where appropriate, by setting aside all or part of proposed procurements for bidding solely by small business firms.

In order to make it easier for small firms to obtain military research and development work, the Department of Defense initiated a study of the use of mechanization for the storage and processing of information concerning sources of research and development capabilities. The bulletin on potential sources of guided missile contract and subcontract work was updated and reissued as "General Procurement Information on Guided Missile Programs, Rockets, and Target Drones."

The fifth and sixth meetings of the DOD Small Business Industrial Advisory Committee were held in October 1958 and June 1959, respectively. Among the topics for discussion at these meetings were: "Review of the Defense Small Business Subcontracting Program," "Mechanized Source Lists," "Synopsis of Proposed Procurements," and the need for business members of the Committee to visit procuring activities.

*Program effectiveness.*—In fiscal year 1959, awards to small business firms totaled $3,783 million. This was an increase of $54 million over fiscal year 1958, and was about the same as the amount received by small firms in fiscal year 1957. However, the small business percentage of total awards declined in this period, from 19.8 percent in fiscal year 1957 to 17.1 percent in fiscal year 1958 and 16.6 percent in fiscal year 1959.

A major reason for the decline in the small business percentage, in spite of the fact that the small business dollar volume did not decrease, was a substantial increase in the volume of procurement of complex aircraft and missile systems during the period, as shown below. Aircraft and missile awards increased from 38 percent of the total in fiscal 1956 and 36 percent in fiscal year 1957 to 48 percent in fiscal 1959. Small firms are not able to undertake any substantial amount of prime contract work in these programs.

[Dollars in millions]

| | Total | Aircraft and missiles ($10,000 or more) | | All other |
|---|---|---|---|---|
| | | Amount | Percent of total | |
| Fiscal year 1956: | | | | |
| All business firms | $17,750 | $6,783 | 38.2 | $10,967 |
| Small business: | | | | |
| Amount | $3,475 | $101 | ---------- | $3,374 |
| Percent | 19.6 | 1.5 | ---------- | 30.8 |
| Fiscal year 1957: | | | | |
| All business firms | $19,133 | $6,883 | 36.0 | $12,250 |
| Small business: | | | | |
| Amount | $3,783 | $149 | ---------- | $3,634 |
| Percent | 19.8 | 2.2 | ---------- | 29.7 |
| Fiscal year 1958: | | | | |
| All business firms | $21,827 | $10,253 | 47.0 | $11,574 |
| Small business: | | | | |
| Amount | $3,729 | $165 | ---------- | $3,564 |
| Percent | 17.1 | 1.6 | ---------- | 30.8 |
| Fiscal year 1959: | | | | |
| All business firms | $22,744 | $10,977 | 48.3 | $11,767 |
| Small business: | | | | |
| Amount | $3,783 | $237 | ---------- | $3,546 |
| Percent | 16.6 | 2.2 | ---------- | 30.1 |

It is noteworthy that the small business percentage for all types of awards other than those for aircraft and missiles has averaged between 29.7 percent and 30.8 percent in this period. This average percentage reflects increases in some programs and decreases in others. Several factors account for the fiscal year 1959 decrease of 0.7 percent in these areas. The principal reasons are found in the declines in the small business share of procurement of ships, petroleum products, and construction as shown by the following data on awards of $10,000 or more.

| | Value of awards (millions) | | Small business percentage | |
|---|---|---|---|---|
| | Fiscal year 1958 | Fiscal year 1959 | Fiscal year 1958 | Fiscal year 1959 |
| Ships | $650 | $1,095 | 12.4 | 8.2 |
| Fuels and lubricants | 868 | 981 | 30.9 | 21.4 |
| Construction | 1,525 | 1,410 | 72.8 | 65.1 |

Large ship construction projects, including awards for nuclear submarines and guided missile ships, emergency procurement of petroleum in the Lebanon crisis, small business failure to meet petroleum price competition and the Small Business Administration's redefinition of the size of small business firms in the petroleum industry, were major factors in these programs.

Table 1 shows that in fiscal year 1959 small firms received 63 percent of the total volume of awards estimated to be within the potential of small business. This compares with 64 percent in fiscal year 1958. This table also indicates that the principal reason that prime contracts were not offered to small business was that there was no known small business source. Table 2 indicates that the

major reasons for failure of small business firms to obtain prime contracts offered to them were that they did not submit a bid or that the bid submitted was not low.

Subcontracting is a very important medium through which small firms participate in defense work. In the first half of fiscal year 1959 (July–December 1958) small subcontractors received $1.6 billion in payments from 257 large prime contractors participating in the defense small business subcontracting program. Data for the second half of fiscal year 1959 are not available. In calendar year 1958, the total prime contract and subcontract business received by small firms continued at the rate of approximately $7 billion per year.

TABLE 1.—*Net value of military procurement actions awarded to small and other contractors, fiscal year 1959*

[Amounts in thousands]

| Procurement action category | July 1958–June 1959 | | | |
|---|---|---|---|---|
| | Total | Army | Navy | Air Force |
| Total | $25,312,065 | $6,008,638 | $7,671,313 | $11,632,114 |
| Intragovernmental | 758,347 | 248,148 | 141,219 | 368,980 |
| For work outside United States | 1,410,051 | 663,199 | 490,918 | 255,934 |
| Educational and nonprofit institutions | 309,438 | 140,226 | 97,849 | 161,363 |
| Total with business firms for work in the United States | 22,744,229 | 4,957,065 | 6,941,327 | 10,845,837 |
| Actions of less than $10,000 | 1,502,532 | 696,558 | 386,188 | 419,786 |
| Actions of $10,000 or more | 21,241,697 | 4,260,507 | 6,555,139 | 10,426,051 |
| Small business potential | 5,999,457 | 2,813,779 | 1,732,959 | 1,452,719 |
| All actions less than $10,000 | 1,502,532 | 696,558 | 386,188 | 419,786 |
| Actions of $10,000 or more offered to small business | 4,496,925 | 2,117,221 | 1,346,771 | 1,032,933 |
| Actions of $10,000 or more not offered to small business | 16,744,772 | 2,143,286 | 5,208,368 | 9,393,118 |
| No known small business source | 14,235,029 | 1,290,033 | 3,700,392 | 9,244,604 |
| Emergency procurement | 90,516 | 15,957 | 67,332 | 7,227 |
| Maintenance of the mobilization base | 740,450 | 692,622 | 49,050 | (−)1,222 |
| Items under proprietary control or standardized | 879,901 | 96,839 | 767,835 | 15,227 |
| Small business cannot meet quantitative or delivery requirements | 798,876 | 47,835 | 623,759 | 127,282 |
| With small business firms | 3,782,850 | 1,740,121 | 1,122,836 | 919,893 |
| Actions of less than $10,000 | 983,361 | 470,321 | 239,472 | 273,568 |
| Actions of $10,000 or more | 2,799,489 | 1,269,800 | 883,364 | 646,325 |
| With other business firms | 18,961,379 | 3,216,944 | 5,818,491 | 9,925,944 |
| Actions of less than $10,000 | 519,171 | 226,237 | 146,716 | 146,218 |
| Actions of $10,000 or more | 18,442,208 | 2,990,707 | 5,671,775 | 9,779,726 |
| Small business percentage | | | | |
| Percent of small business potential | 63.1 | 61.8 | 64.8 | 63.3 |
| Percent of total with business firms | 16.6 | 35.1 | 16.2 | 8.5 |

TABLE 2.—*Net value of military procurement actions of $10,000 or more which were offered to small business firms, fiscal year 1959*

[Amounts in thousands]

| | July 1958–June 1959 | | | |
|---|---|---|---|---|
| | Total | Army | Navy | Air Force |
| VALUE | | | | |
| Offered to small business, actions of $10,000 or more | $4,496,925 | $2,117,221 | $1,346,771 | $1,032,933 |
| Awarded to small business firms | 2,799,489 | 1,269,800 | 883,364 | 646,325 |
| Not awarded to small business firms [1] | 1,697,436 | 847,421 | 463,407 | 386,608 |
| Small business did not bid | 362,623 | 158,931 | 83,849 | 119,843 |
| Small business bid was not low | 1,248,775 | 650,562 | 358,985 | 230,228 |
| Small business bid was not responsive | 30,648 | 7,051 | 11,213 | 12,384 |
| Small business bidder not a "responsible" prospective contractor (ASPR 1-307) | 8,231 | 3,026 | 2,846 | 2,359 |
| Small business bid not accepted for other reasons [2] | 47,159 | 18,851 | 6,514 | 21,794 |
| PERCENTAGE DISTRIBUTION | | | | |
| Offered to small business, actions of $10,000 or more | 100.0 | 100.0 | 100.0 | 100.0 |
| Awarded to small business firms | 62.2 | 60.0 | 65.6 | 62.6 |
| Not awarded to small business firms [1] | 37.8 | 40.0 | 34.4 | 37.4 |
| Small business did not bid | 8.1 | 7.5 | 6.2 | 11.6 |
| Small business bid was not low | 27.8 | 31.2 | 26.7 | 22.3 |
| Small business bid was not responsive | 0.7 | 0.3 | 0.8 | 1.2 |
| Small business bidder not a "responsible" prospective contractor (ASPR 1-307) | .2 | .1 | .2 | .2 |
| Small business bid not accepted for other reasons | 1.0 | .9 | .5 | 2.1 |

[1] Data on reasons small business did not receive contract awards are not available for procurement actions less than $10,000 in value.

[2] For reasons which in most cases relate to quality or technical evaluation of the product.

### ASSISTANCE IN LABOR SURPLUS AREAS

*Authority.*—The Department of Defense program of assisting labor surplus areas and industries is conducted under the authority of the Defense Production Act of 1950, as amended, and as prescribed by defense manpower policy No. 4.

*Summary of activities.*—During fiscal year 1959, the Department of Defense continued to emphasize its program of assisting firms in labor surplus areas and industries obtain defense work. Defense procurement officials placed negotiated awards in labor surplus areas to the maximum extent consistent with the principle that no price differentials were to be paid. Where appropriate, portions of prospective procurements were reserved for bidding by firms in depressed areas. Within labor surplus areas, preference was given to small firms. Where less than the entire bidders' list was solicited, a proportionate share of firms in labor surplus areas was included in the solicitation. Prime contractors were encouraged to place subcontracts with concerns in depressed areas, and a clause to this effect was incorporated in all fixed-price supply contracts of more than $5,000. Four directories of firms in labor surplus areas were published and distributed to major procuring activities in the Federal Government and to a large number of prime contractors for their use in locating sources of supply. In conjunction with the small business program, 12 Armed Forces procurement conferences were held in various parts of the United States to educate businessmen in the procurement procedures involved in obtained military work. Eight regional and local exhibits of business opportunities were conducted to provide firms in depressed areas with information on military procurement requirements. In addition, five areas were assisted in developing community action programs to improve their economic conditions.

*Program effectiveness.*—In fiscal year 1959, military prime contract awards of $10,000 or more for supplies, services and construction to firms in labor surplus areas and industries totaled $9.3 billion, or 42 percent of all military procurement contracts of this size. In the previous fiscal year, the total was $3.9 billion. In the first half of fiscal year 1958, data were not obtained for supply contracts between $10,000 and $25,000 or for construction and service contracts.

However, the inclusion of such awards, it is estimated, would not have added significantly to the total for that year. Much of the procurement from firms in labor surplus areas is the result of normal procurement processes rather than preference action. Awards involving a set-aside or tie-bid preference amounted to $96 million in fiscal year 1959, compared to $37 million in the preceding year.

### INDUSTRY INTEGRATION COMMITTEES

*Authority.*—The program is being conducted under the provisions of section 708 of the Defense Production Act, as amended, and upon approval of the voluntary agreements by the Attorney General.

*Summary of activities and program effectiveness.*—Reports on integration committees are submitted quarterly to the Congress through the Office of the Attorney General as required by section 708 of the Defense Production Act of 1950, as amended. Reports were submitted to the Attorney General by the Judge Advocate General of the Army on October 17, 1958; January 19, 1959; April 17, 1959; and July 20, 1959.

### INDUSTRIAL DISPERSION PROGRAMS

*Authority.*—Department of Defense Directive 5220.5, dated November 17, 1955, prescribes policy with respect to dispersal of industrial facilities consistent with the dispersion amendment of the Defense Production Act. This policy states that dispersal will be a key factor in determining additional sources for items of material or development, and a prime consideration in determining the locations of new industrial facilities, at the same time recognizing that factors such as cost, social and economic implications and other practical elements, such as requirement for timely delivery of vital products, must also be considered in any planned procurement.

In accordance with the provisions of Defense Mobilization Order I–19, dated January 11, 1956, the determination as to whether a facility is in a dispersed location is based on the standards developed by representatives of OCDM, Defense, and Commerce with respect to congested urban areas, and in addition, the standards developed by Department of Defense for nonurban locations with respect to proximity to key military installations and industrial facilities.

*Summary of activities.*—During the 12-month period ending August 1959, the Office of the Assistant Secretary of Defense (Supply and Logistics) processed 474 dispersion inquiries requesting advice on the dispersion aspects of proposed locations with respect to proximity to key industrial facilities and major military installations. The 474 inquiries received during this period is an increase of 188 or 65.7 percent over the previous 12-month period. Inquiries received from Federal agencies increased from 154 to 401 or 160.4 percent, while inquiries from private industry decreased from 132 to 73 or 44.7 percent.

The source and number of dispersion inquiries processed from September 1958 through August 1959 is summarized as follows:

| | Total | Met standards | Did not meet standards |
|---|---|---|---|
| Total | 474 | 359 | 115 |
| Treasury Department | 232 | 173 | 59 |
| Federal Housing Administration | 74 | 56 | 18 |
| Federal Reserve Board | 70 | 50 | 20 |
| Private industry | 61 | 54 | 7 |
| Tax amortization | 12 | 11 | 1 |
| OCDM | 11 | 8 | 3 |
| Veterans' Administration | 6 | | 6 |
| U.S. Information Agency | 3 | 3 | |
| Miscellaneous Government agencies [1] | 5 | 4 | 1 |

[1] Regional mobilization committees, Federal Aviation Agency, Department of Defense.

### NATIONAL MOBILIZATION PROGRAM PLANNING AND MOBILIZATION MATERIAL REQUIREMENTS

*Authority.*—Under DMO I–12, covering mobilization planning assignment to the Department of Defense, and DMO V–1, on materials planning, the Department of Defense is named as a principal agency on which OCDM relies for advice.

*Summary of activities*

(*a*) *National mobilization program planning.*—Emergency planning activities within the Department of Defense during the past year have emphasized the need for a solution to the problem of providing effective military representation to each of the eight newly organized OCDM regions. This culminated in the issuance on August 25, 1959, of DOD Directive 3025.9 which provides for the designation by the Department of the Army of a principal DOD representative to each OCDM Regional Civil and Defense Mobilization Board (RCDMB). The Departments of the Navy and Air Force are to designate assistant DOD representatives. The principal representative is to submit consolidated DOD claims for those resources, including services, which are susceptible of management on a regional basis, and in the event allocations made by the OCDM Regional Director are insufficient to meet military needs, to further allocate between the military services based on the urgent military situation then prevailing. Provision is also made for utilization by the DOD regional representative of the services of DOD single manager agencies and major logistical commands.

The directive further stresses the need for forecasting emergency military needs currently, submitting DOD claims, and securing allocations from the OCDM Regional Director, preattack, so that effective military operations will not be jeopardized in an actual situation. (Agreement on the directive was not achieved in time to test the adequacy of the new concept in DOD regional representation.)

For several years, the Department of Defense has urged the adoption by OCDM and its predecessor agencies, of a national relative urgencies system which would provide interim guidance at all echelons of control for resolution of conflicting claims for resources among military operations, survival activities, restoration and rehabilitation of the national economy, and other essential and desirable programs. During the regional phases of Operation Alert 1959, it became apparent that such guidance was mandatory. The Director, OCDM, during the national phase of the exercise, approved the proposed criteria submitted by the DOD as an interim national relative urgencies system and further directed that it be staffed for inclusion in the national plan for civil defense and defense mobilization.

(*b*) *Materials requirements for mobilization.*—By December 1958, work had been completed on the cycle of mobilization requirements computations initiated in 1957 on general war assumptions. Application of these revised requirements to the review of stockpile objectives and other mobilization planning activities is proceeding under the leadership of OCDM.

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## LABOR DEPARTMENT

U.S. DEPARTMENT OF LABOR,
OFFICE OF THE SECRETARY,
*Washington, D.C., October 14, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Washington, D.C.*
(Attention of Mr. Harold J. Warren).

DEAR CONGRESSMAN BROWN: The annual report requested in your letter of August 10, 1959, is enclosed. It constitutes a brief, factual summary of the major mobilization activities carried out by the Department of Labor in the past year.

The report follows an outline different from the one suggested in your letter; however, any points applicable to this Department's activities have been covered.

If further information would be useful to your committee, please call upon us.

Yours sincerely,

JAMES T. O'CONNELL,
*Under Secretary of Labor.*

### PART 1: GENERAL INFORMATION

The authority from which your organization derives its powers for such programs.

The act of March 4, 1913 (5 U.S.C. 611), R.S. 161 (5 U.S.C. 22), Reorganization Plan No. 6 of 1950 (15 E.R. 3174; 5 U.S.C. 611, note), Executive Order 10346

of April 17, 1952 (3 CFR 1952 Supp., p. 74), as amended, and Executive Order 10480 of August 14, 1953 (3 CFR 1953 Supp., p. 98), as amended, and by agreements reached with OCDM relating to the Department's mobilization and civil defense responsibilities.

BASIC MOBILIZATION RESPONSIBILITIES OF THE DEPARTMENT

1. Identify and formulate plans, programs, and policies needed to assure physical protection, expansion, training, and distribution of the labor force.
2. Develop appropriate economic measures to assure stability of the labor force including worker incentives, reemployment rights, income maintenance, and wage and salary stabilization; and, in respect to authorized civil defense workers, plans for wage and salary compensation and for death and disability benefits.
3. Develop plans, programs, and procedures for a comprehensive system of research, reporting, analysis, and economic-advisory services during mobilization or emergency periods, including the provision of appropriate manpower information for use of other agencies and the review of data and programs affecting manpower developed by other agencies.
4. Develop organization plans and necessary administrative methods for carrying out mobilization and civil defense manpower programs during the emergency.
5. Develop measures for maintaining effective labor-management relations during an emergency.

MAJOR AREAS OF ACTIVITY DURING FISCAL YEAR 1959

During fiscal year 1959, the Department has concentrated its efforts in five major areas of activity:

1. The Department has continued its close liaison with OCDM offices responsible for emergency planning. It has reviewed and contributed suggestions to the development of the national plan and its annexes. It has participated in the revision of Executive orders assigning emergency responsibilities to the Department and to other delegate agencies and has assisted in the preparation of classified planning documents. The Department has assigned a member of its staff to the cadre maintained at the OCDM relocation site, and has contributed to the work of the National Damage Assessment Center, including participation in NDAC training sessions at OCDM regional offices. The Department has collaborated with the Manpower Office of OCDM in the presentation of manpower mobilization plans at conferences of selective service State directors and their executive reservists, and has conducted briefing sessions for the senior staff of the OCDM Manpower Office.

2. The Department has maintained and improved its relationships with other Federal agencies with which it has a coordinating responsibility. Arrangements have been completed for closer cooperation at the operating level between the Selective Service System and the public employment service. These arrangements should contribute to the effective allocation of manpower between military service and civilian activity and to the utilization of selective service boards by local employment offices in an emergency as an additional source for identifying and locating potential applicants who possess shortage skills. Similarly the Department has been developing working arrangements and methods of cooperation between the Civil Service Commission and the public employment service in staffing the Federal establishment in a postattack emergency.

3. The Department has endeavored to improve its own state of readiness. It has developed a plan for adjusting the regional boundaries of its 11-region Bureau of Employment Security operation to meet the needs of the 8-region OCDM pattern. It has revised chapter V, "Recruitment, Training, and Allocation Methods and Control," of its Defense Readiness Handbook which has been distributed to its 1,800 affiliated local employment offices. It has begun a revision of the Employment Security Manual for the purpose of providing local employment offices with operations guidance in the event of full mobilization. It has reviewed intensively the manpower annexes of 12 State survival plans and has made recommendations to the State agencies concerned for the improvement of those annexes.

4. Considerable effort has been expended in the development of meaningful problems and exercises related to Operation Alert 1959. Operation Alert 1958 was carefully evaluated, and many of the Department's fundamental recommendations were incorporated by OCDM in the 1959 exercise. Operation Alert

1959 has required extensive planning at the national level and in the regional offices of the Department.

5. In recognition that a civil defense and defense mobilization program will have merit only if a comprehensive manpower planning program is extending to every level of operation, the Department has prepared plans for initiating a local, State, regional, and national program of emergency readiness. Planning has included: (*a*) various elements of manpower operations; (*b*) economic statistics for policy determination and guidance of emergency operations; (*c*) economic stabilization, including wage and salary stabilization and wage and price statistics necessary for administration of economic stabilization programs; (*d*) labor-management relations; (*e*) employment incentives programs, and (*f*) an executive reserve program.

Perhaps the most important of these activities, in the long run, will be planning the comprehensive program of local, State, regional and national readiness. In fiscal year 1959, there has been very little more than a holding action. There is need for comprehensive revision of basic programs that will take full account of the magnitude of a possible attack on the United States. There have never been any funds specifically earmarked for use by State agencies for the development of local and State readiness programs. As a result, the level of readiness training at the local and State level is largely that represented by the limited participation by these offices in Operation Alert exercises. New techniques must be improvised and tested. Organizational patterns must be developed for use at all governmental levels in an emergency. Statistical materials must be improved and placed in format to facilitate analysis by high speed computers stationed at national and regional sites.

Wage and salary stabilization measures must be formulated and be ready for use in the event of an emergency. Plans must be proposed for the resolution of labor disputes in an emergency situation. Plans necessary for the accomplishment of these measures have been identified during the past year. This should permit a rapid execution of planning emergency readiness programs whenever adequate funds are made available to the Department.

## PART 2: SPECIFIC PROGRAMS

### ACCOMPLISHMENTS WITH RESPECT TO ASSIGNED RESPONSIBILITIES

For ease of reference, this section of the report is presented under a series of broad subject-matter headings rather than in terms of the organizational units responsible for the several fields of work.

*1. Manpower programs for field use*

A. *Revision of "Defense Readiness Handbook."*—The Department completed and issued to the State agencies, in the form of revised chapter of the Defense Readiness Handbook, improved guidelines for planning their employment service operations in a postattack emergency. It emphasizes the fact that the heaviest impact of the postattack manpower job is likely to fall on local offices in areas which receive large numbers of evacuees from attacked areas; and it provides greater flexibility in operating approaches, based upon the degree to which an attack affects an area.

B. *Guidelines for partial and total manpower mobilization.*—A revision was initiated by the Employment Security Manual chapter on "Partial Manpower Mobilization" to make this material applicable to full-scale mobilization situations as well as to the type of national mobilization effort which would apply to limited military engagement, such as that which took place in Korea at the beginning of the current decade. The revised materials, when completed, will attempt to spell out the programs and procedures which would apply in the operation of the public employment service under varying degrees of mobilization intensity short of a situation involving attack upon the United States. Because of current uncertainty regarding the availability of funds, it is impossible to estimate when the revised guidelines will be completed.

C. *Cooperation with the Selective Service System.*—The Bureau of Employment Security and the Selective Service System completed arrangements for closer cooperation at the operating level between the latter organization and the public employment service. State employment security agencies and selective service officials were urged to schedule early meetings at State and local levels. As such meetings took place throughout the country, improved methods

for consulation between selective service boards and local employment offices in using the lists of critical occupations and essential activities were discussed. Plans were made for assistance by selective service boards to local employment offices in identifying potential applicants for jobs in shortage occupations. These procedures could apply to all civil defense skills in a postattack period.

Regional directors of the Bureau of Employment Security represented the Department in describing its manpower programs and organization at training meetings for selective service reservists. This series of 2-week meetings is continuing into the current fiscal year. At the meetings the regional directors identified areas of mutual interest to the Selective Service System and the public employment service, both in peacetime operations and in mobilization planning.

D. *Cooperation with the Civil Service Commission.*—Staff members of this Department and representatives of the U.S. Civil Service Commission began a series of conferences concerned with working relationships and methods of cooperation between the Commission and the public employment service in staffing the Federal establishment under mobilization conditions. The product of these conferences will be a series of mobilization circulars, issued by the Commission to its field offices, describing the relationships between the Commission (representing the Federal Government as an employer) and the public employment service.

*2. Associated research activities*

A. *Damage assessment activities.*—During the last quarter of fiscal year 1959, the Department contributed one or more man-days per week to maintaining a departmental liaison function with the National Damage Assessment Center at the OCDM classified site. Attention has been devoted to the following aspects of this work: (*a*) More precise identification and definition of data which should be introduced into the system; (*b*) the statistical and mechanical treatment necessary to give the fullest meaning and utility to the data; (*c*) broad programs for determining the analysis and use of these data for major manpower and stabilization purposes.

B. *Feasibility testing.*—During Operation Alert 1958, a discussion paper on manpower supply and requirements was prepared. This paper commented on the preliminary way in which feasibility testing methods had been utilized during OPAL 1958, and explained data adjustment and manpower allocation assumptions used during the exercise.

During the rest of the year, selected elements of this work continued, including participation in all phases of planning for the manpower management aspects of Operation Alert 1959. This work included the development of labor force estimates by OCDM regions, and in the same categories, estimates of labor force survivors and nonlabor force survivors by sex and age group. The Department obtained from claimant Federal agencies, estimates of manpower required by them to carry out their assigned tasks under the exercise assumptions. These requirements data were obtained in final form from 8 of the 10 major resource areas. In the case of the production area, the Commerce Department furnished sufficient assumptions from which the Bureau developed manpower requirements estimates, and in the case of the military area, manpower estimates were simulated by the Bureau in deference to the Defense Department's security restrictions.

These manpower supply and demand data, complete with explanations for their use, were sent to the field. Department of Labor personnel assigned to each of the eight OCDM regions processed these data along with other departmental field staff. Under the auspices and with the help of the regional OMA, field representatives proceeded over a 2-month period to work with field representatives of the delegated claimant agencies and the OCDM in their respective regions, on the manpower supply-demand analysis problem. The considerable volume of work thus prepared was to become one of the major factors in the regional phase of the exercise.

C. *Skill surveys.*—Plans were initiated, jointly with the national office of OCDM and with the State employment security agencies in Illinois and Iowa, for a survey of selected occupational skills in the Davenport-Rock Island-Moline area. The skills to be covered in the survey will include those for which an urgent need might be expected in a postattack emergency. Insofar as these emergency skills are concerned, the survey is expected to identify sources from which workers may be found who can be trained in advance of an emergency

to serve as integrated groups, or "task forces," to carry out such postattack jobs as firefighting, mass feeding, and emergency housing construction. Plans were also being considered at the close of the fiscal year for similar surveys in selected areas in West Virginia.

*3. Measures to assure stabilization of the labor force*

Because funds available for this fiscal year were not adequate to cover all phases of the Department's mobilization responsibilities, relatively little attention was given to the fields of wage compensation for civil defense workers, wage stabilization and the settlement of wartime labor disputes except for those aspects directly related to the Department's participation in Operation Alert 1959.

Very substantial work, however, was done in respect to the need for compensating civil defense workers for death or injuries incurred in the pursuit of civil defense tasks. The Department completed its summary of the principal provisions of State workmen's compensation laws which relate to civil defense volunteers and personnel of mobile support units who are injured or killed while engaged in civil defense duties or in related training activities. This summary was sent to the State workmen's compensation administrators for review and identification of any necessary modification. It brings up to date the digest of laws originally prepared and issued by the Department in 1952 and it has been distributed to all State workmen's compensation administrators and other interested groups, as well as to OCDM.

No work was undertaken in respect to worker incentives except for the preparation of a draft order covering reemployment rights. This order, similar to the ones used during Operation Alert 1958, has been submitted to the Solicitor of Labor for legal clearance.

*4. The general field of training*

During the year a plan was drawn up which would provide an outline for a war training program to include (*a*) statements of policy, and (*b*) proposed organization.

During the year, regional directors submitted reports on two projects: (*a*) information to be contained in a national training policy; and (*b*) a planning outline for the development of an evaluation of skills and training facilities.

ORGANIZATIONAL AND ADMINISTRATIVE ARRANGEMENTS AND PROBLEMS

*1. Regional boundaries*

Effective cooperation between OCDM regional directors and regional directors of the Office of Manpower Administration of the Department of Labor involved the resolution of problems brought about by the differences in the boundaries of the 11 BES regions and the 8 OCDM regions. A mutually satisfactory adjustment was brought about under which eight of the Bureau's regional directors were given primary OMA responsibility and were authorized to work directly, on matters involving the OCDM, with State agencies which might be outside their own BES regions but still within the OCDM regions where the designated OMA regional offices are located.

*2. Regional relocation sites*

In the field, administrative management personnel kept the Department's regional relocation sites in a state of readiness, including training of communications personnel. Professional personnel participated in meetings with OCDM and other agencies, primarily in preparation for OPAL 1959.

*3. Executive reserve program*

During the past fiscal year, three new executive reservists were appointed, bringing the total to 10. The executive reserve program was extended to the regions, two of the new reservists being assigned to regional offices. Executive reserve appointments in the six remaining regions are in various stages of processing. At the close of the fiscal year, the executive reserve program was being extended further to include executives from the trade union movement. Preliminary steps have been taken to bring a small number of trade union people into the program.

*4. Wartime staffing*

Representatives of the Office of Personnel Administration met with representatives of the U.S. Civil Service Commission for exploratory discussions of the staffing requirements of the Labor Department in a national emergency.

*5. Safety training courses*

Safety training coureses were conducted at 14 defense installations throughout the United States. A staff member attended the radiological defense officers course in Battle Creek, Mich., and following this course conducted a course in Iowa on radiation hazards.

PART 3: PROJECTED PLANS FOR 1960

In the field of general manpower programing, major emphasis will be directed to the development of additional "standby" materials for the use of field offices. These will supplement the Defense Readiness Handbook and other documents already prepositioned at relocation sites and State and local offices.

In respect to associated research activities, every effort will be made to select areas of study which will support, strengthen or clarify the basic operating programs to be developed in the manpower and stabilization fields.

Much important work related to the development of measures for stabilizing the labor force remains to be undertaken, particularly in respect to worker incentives.

In the event funds made available to this Department permit, the following activities would be undertaken in respect to mobilization training activities:

1. Skill improvement for mobilization and civil defense purposes;
2. Systematic consultation with training officials in industry and Government on feasible methods for increasing the number of training programs and trainees;
3. Development of methods for utilization of workers at their highest skill potential, and in the shortest period of time; and
4. Development of training measures for restoration of the economy after an attack.

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## FEDERAL RESERVE SYSTEM

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM,
*Washington, D.C., September 16, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Congress of the United States,*
*Washington, D.C.*
(Attention Mr. Harold J. Warren, clerk and counsel, room 459, Old Senate Office Building, Washington, D.C.)

DEAR MR. BROWN: In response to your letter of August 10, 1959, attached is a factual summary covering mobilization activities of the Board of Governors for the past year.

The summary covers three programs—the program for the continuity of the essential functions of the Federal Reserve System in the event of an attack on the United States, the commercial bank preparedness program, and the V-loan program.

Sincerely yours,

WM. MCC. MARTIN, JR.

Attachment.

CONTINUITY OF ESSENTIAL FUNCTIONS OF THE FEDERAL RESERVE SYSTEM

*1. Mobilization programs conducted by your organization*

Development of plans to assure the continuity of the essential functions of the Federal Reserve System in the event of an attack on the United States, and development of measures in the monetary and bank credit fields to deal with the potential economic consequences of an attack.

*2. The authority from which your organization derives its powers for such programs*

The authority to develop plans and preparedness measures for the continuity of the essential functions of the Federal Reserve System and to deal with the potential economic consequences of an attack derives from the National Security Act of 1947, as amended, the Defense Production Act of 1950, as amended, the Federal Civil Defense Act of 1950, as amended, Executive Order 10346, and Defense Mobilization Order I–20.

*3. A summary of each program*

Beginning shortly after the enactment of the National Security Act in 1947, the Board of Governors of the Federal Reserve System initiated the development of plans for an attack situation. Over the past 12 years these plans have been subject to continuing review and improvement. The plans are based on the assumption (1) that the money and credit system must and can be maintained, (2) that banking operations must be continued wherever physical conditions permit, and (3) that all the means to assure the continuance of banking operations in the national interest, including liquidity, credit, currency, and equitable sharing of war losses will be provided.

The Board has provided for the continuity of its essential functions which, among others, are to provide currency related to economic needs, to provide a more effective supervision of banking, and to provide monetary, credit, and operating policies for the Federal Reserve System.

The Board has established and maintains a relocation office in constant readiness. The relocation office has a fair degree of protection against radioactive fallout. It is supplied with emergency food and medical stocks, and is equipped with adequate communication facilities. Provision has been made for the billeting of personnel in the relocation office should radioactive fallout conditions make this necessary. Operating records are maintained at the relocation office and kept current daily. The relocation office is staffed with personnel trained in Federal Reserve operations and trained in radiation detection and communi cations.

The Board has provided for a line of succession, including a provision for an "interim Board" to be drawn from officers of the Federal Reserve Banks in the event that the entire Board should be wiped out, and has provided for the automatic delegation of all necessary authority to surviving members of the Board and to the interim Board.

It has provided the Federal Reserve banks with emergency policy guidelines, and has provided for the automatic delegation of authority to any Federal Reserve bank to take such action as may be necessary on matters which would otherwise require Board approval, in the event any such bank should be unable to communicate with the Board or the interim Board.

The Federal Open Market Committee, whose membership consists of each member of the Board of Governors and five representatives of the Reserve banks, has adopted comparable plans for its emergency operations. The plans provide for a line of succession, authorization to Reserve banks to take action in the event they are out of communication with the Committee, and guidance to Reserve banks in reconstructing open market accounts and in providing special financing for the Treasury in an emergency.

The Federal Reserve banks have taken actions similar to those of the Board of Governors. They all maintain relocation offices with current records and emergency operating manuals. They have provided for a line of succession among their officers and made delegations of authority to be effective in an emergency. They have provided for the appointment of acting Federal Reserve agents, and for the continuity of fiscal agency and foreign operations. They have built up an emergency supply of Federal Reserve notes, equivalent to a 2½ years' supply based on current use.

They are providing for the decentralization of check collection and currency distribution operations by the selection of check agents and cash agents to carry on these functions in all areas; particularly in those areas which might be temporarily isolated and where human activity might be permissible immediately following an attack.

Most of the Federal Reserve banks have completed the development of emergency operating instructions for carrying out check collection and currency distribution operations. In some instances, they have already distributed these emergency instructions to commercial banks in their districts.

*4. A summary of the effectiveness of the programs*

The effectiveness of the program has been tested during five annual Operations Alert against a variety of possible attack patterns. These tests have demonstrated the validity of emergency plans which provide for flexibility in their application to areas of great damage, marginal areas, and relatively undamaged areas, and which provide for delegation of authority and decentralization of operations to overcome the effects of possible disruptions in communications and transportation.

*5. A statement on the current need for the programs*

The program will be needed as long as any potential enemy has the capability of launching a massive nuclear attack upon the United States. The program contributes to the total force of deterrents and to the Nation's preparedness to maintain the money and credit system postattack.

*6. A summary of the programs as related to small business*

The program relates to the entire economy, to small business as well as large.

*7. Major problems which now confront your organization in carrying out mobilization programs*

The major problems in improving the effectiveness of this program are (1) the need to provide additional fallout protection at the regular and relocation offices of the Board, the Federal Reserve banks, and the branches, and (2) the need for a greater number of commercial banks to undertake and improve their preparedness.

*8. Changes in mobilization planning and readiness measures to meet future emergencies*

None.

*9. Summary of any standby programs for any future emergency*

One of the basic requirements for the maintenance of the money and credit system and for the postattack financial and economic rehabilitation, is to provide some means for the indemnification or the equitable sharing of war losses. In 1957, a Federal Reserve staff committee prepared a memorandum on the subject "Preattack Planning for Postattack Financial and Economic Rehabilitation," which dealt extensively with possible means for the equalization of war losses. During 1959, the staff committee prepared a revised report dealing with techniques and methods for maintaining the monetary and credit system, expediting financial and economic rehabilitation, and providing for the equitable sharing of war losses. A standby program for the indemnification or equalization of war losses, which can be put into effect immediately following an attack, is to be developed by the Federal financial agencies acting under the chairmanship of Office of Civil and Defense Mobilization.

*10. Changes in organization during the past year*

The Board has established as a separate staff unit an Office of Defense Planning which is responsible for the coordination of defense planning and mobilization activities among all staff units of the Board, and between the Board and the Federal Reserve banks. It has also established a liaison office at the relocation site of the Office of Civil and Defense Mobilization.

*11. Future objectives*

This program is a continuing program, therefore, our future objectives are to keep our preparedness measures current and to constantly improve our readiness.

*12. Availability of funds for defense needs*

Not applicable.

*13. Such other information as may appear pertinent in summarizing your mobilization activities for the past year*

Considerable progress has been made during the past year in reaching decisions on basic economic and financial policies for a postattack situation. It is expected that during the coming year, these basic policies will be reflected in emergency documents which can be distributed to State and local authorities, to banking institutions, and to other financial institutions, in order that they may improve the status of their preparedness.

### Commercial Bank Preparedness Program

*1. Mobilization programs conducted by your office*

Development of plans, in cooperation with the Department of the Treasury, including the Comptroller of the Currency, and the Federal Deposit Insurance Corporation, to encourage preparedness measures by the commercial banking system designed to assure continuity of operations of the banking system in the event of enemy attack, including the preservation of essential records.

*2. The authority from which your office derives its power for such programs*

Defense Mobilization Order I–20.

*3. A summary of each program*

This program seeks to accomplish its purposes (1) by acquainting commercial banks with the importance of making plans for preservation of essential records and continuation of operations in the event of attack, and (2) by providing guidance as to how this might be done.

Two committees of bankers are working on the program—an Advisory Committee on Commercial Bank Preparedness and a Banking Committee on Emergency Operations, the later a committee composed of senior operating officers.

During the first part of 1958, the Committees issued and distributed to all banks in the country five booklets describing preattack preparedness measures. These booklets were subsequently reprinted under one cover and widely distributed by the Office of Civil and Defense Mobilization. The Committees are now working on additional booklets concerning measures and operations following a destructive attack. The manuscript for the first of these, "Collection of Cash Items and Noncash Items," has been distributed to the supervisory authorities for clearance. A draft of the second, "Cash (Currency) Operations," is expected in October 1959.

*4. A statement on the effectiveness of each program*

In April, the State association section of the American Bankers Association appointed a special national committee of State association secretaries to work on the preparedness program for emergency operations in banking. At last report, 37 State bankers associations had appointed similar emergency preparedness committees. Tabulations made from reports of examination of 12,208 banks examined between May 1, 1958, and April 30, 1959, received by Federal and State bank supervisory agencies through July 17, 1959, show one or more emergency preparedness measures to have been taken by 641 banks. Of these, 395 were national banks, 130 were State member banks, 108 were insured nonmember banks, and 8 were nonmember noninsured State banks.

*5. A statement on the current need for the programs*

It is believed that an effectively functioning banking system would be essential to the Nation in time of war as well as in peace, and that adequate preparedness measures are essential for such a continuing banking system.

*6. A summary of the programs as related to small business*

The program relates to the entire economy, to small business as well as large.

*7. Major problems which now confront your office in carrying out mobilization programs*

The major problems in carrying out the program are (1) lack of realization on the part of many banks of the need for preparedness measures, and (2) a general belief that an adequate preparedness program will cost too much.

The need for preparedness measures is being brought to the attention of all banks through various banking associations, Federal and State supervisory agencies, and publications. Cost studies have been completed by the New York State Bankers Association and the Connecticut Bankers Association which indicate that the cost of an adequate preparedness program is not excessive. Similar studies are in progress in other States.

It is hoped that the dissemination of information as to the need for and the cost of an adequate preparedness program will help to overcome the major problems.

*8. Changes in mobilization planning and readiness measures to meet future emergencies*

None.

*9. Summary of any standby programs for any future emergency*

The entire program is directed toward preparedness for any future emergency.

*10 Changes in organization during the past year*

An Office of Defense Planning has been established as a part of the staff of the Board of Governors of the Federal Reserve System.

*11. Future objectives*

Implementation of the program.

*12. Availability of funds for defense needs*

Not applicable.

*13. Such other information as may appear pertinent in summarizing your mobilization activities for the past year*

None.

GUARANTEED LOAN PROGRAM

*1. Mobilization programs conducted by your office, including the "V-loan program" conducted under the authority of the Defense Production Act as amended and the implementing Executive orders*

The Federal Reserve banks, under regulations of the Board of Governors, act as fiscal agents of the United States in connection with the V-loan program for Government guarantees of defense production loans, and the Board of Governors, after consultation with the guaranteeing agencies, prescribes fees, rates, and procedures to be utilized in connection with such guarantees.

*2. The authority from which your office derives its power for such programs*

The present "V-loan program" of Government guarantees of loans to finance defense production was inaugurated under authority of the provisions of section 301 of the Defense Production Act of 1950, approved September 8, 1950, and the President's Executive Order 10161, dated September 9, 1950, subsequently superseded by Executive Order 10480, dated August 14, 1953; and Executive Order 10819, dated May 8, 1959. Under the law, as amended by the Defense Production Act Amendments of 1958, authority for the program, unless further extended, will terminate on June 30, 1960.

*3. A summary of each program*

Pursuant to the law and Executive orders of the President, certain designated procurement agencies of the Government are authorized to guarantee loans made by private financing institutions to finance contractors, subcontractors and others engaged in the performance of Government defense contracts for the purpose of expediting production and deliveries or services for the national defense. By an amendment made by the Defense Production Act Amendments of 1953 guarantees may also be issued with respect to loans made to finance contractors, subcontractors or other persons in connection with or in contemplation of the termination of their defense contracts.

At the outset of the program the designated guaranteeing agencies were the Departments of the Army, Navy, Air Force, Commerce, Interior and Agriculture, and the General Services Administration. In 1951 the Atomic Energy Commission and Defense Materials Procurement Agency were also designated as guaranteeing agencies. By Executive Order 10480 of August 14, 1953, the Defense Materials Procurement Agency was abolished and its functions transferred to the General Services Administration. By Executive Order 10819, dated May 8, 1959, the National Aeronautics and Space Administration was designated as a guaranteeing agency.

On July 31, 1959, guarantee agreements outstanding totaled $451,838,000. Of this amount, approximately 75 percent on the average was guaranteed by the Government. Under these guarantee agreements in force on July 31, loans outstanding amounted to $322,801,000 and there was available to borrowers an additional $129,037,000. The guarantee agreements outstanding by the various agencies participating in the program follow:

| | |
|---|---|
| Department of the Army | $24, 871, 000 |
| Department of the Navy | 188, 178, 000 |
| Department of the Air Force | 192, 863, 000 |
| General Services Administration | 43, 195, 000 |
| Atomic Energy Commission | 2, 732, 000 |

The net guarantee fees and interest on purchased loans collected by the guaranteeing agencies after deducting established losses, administrative costs and the expenses of the Federal Reserve banks as fiscal agents as of July 31, 1959, follow:

| | |
|---|---|
| Department of the Army | $5,257,000 |
| Department of the Navy | 9,261,000 |
| Department of the Air Force | 12,222,000 |
| General Services Administration | 5,325,000 |
| Atomic Energy Commission | 511,000 |
| Total net income | 32,576,000 |

The Department of the Army estimates that of the loans it has purchased approximately $2,250,000 is uncollectible. The Department of the Navy estimates that of the loans it has purchased approximately $14,000 is uncollectible. The Department of the Air Force, the Atomic Energy Commission and the General Services Administration do not at this time anticipate any losses.

There has existed since the inauguration of the "V-loan program" complete cooperation and understanding between the guaranteeing agencies, the staff of the Board of Governors and the Federal Reserve banks. Any differences that have arisen have been promptly settled and the primary purpose in the minds of all connected with the program has been to facilitate the financing of defense contractors as provided in section 301 of the Defense Production Act of 1950 as amended, and the implementing Executive orders.

*4. A statement on the effectiveness of each program.*
*5. A statement on the current need for the programs.*
*6. A summary of the programs as related to small business.*

The guaranteed loan program was successful and fulfilled a useful purpose during World War II and has been effective during the present rearmament period. It provides a mechanism whereby defense contractors and subcontractors, particularly small business concerns, can arrange to borrow the funds necessary to finance their defense production through their local banks by means of Government-guaranteed loans rather than through the advance of Government funds or direct Government loans.

From the beginning of the program in September 1950 through July 31, 1959, 1,557 loans totaling $3,169,911,000 were authorized by the procurement agencies which may guarantee such loans under the Defense Production Act of 1950, as amended.

There was disbursed during the last 12 months since July 31, 1958, approximately $1,155,848,000 on outstanding V-loans, most of which are revolving credits.

The large amount of defense work financed through the medium of V-loans can be realized when you consider that the average ratio of the dollar value of contracts held by borrowers to the amount of money borrowed under the V-loan program to finance such contracts has been about 6 to 1.

The following tabulation shows the number and amount of guaranteed loans authorized at the end of each month in the period August 1958 through July 1959.

| | Guaranteed loans authorized to date | | | Guaranteed loans authorized to date | |
|---|---|---|---|---|---|
| | Number | Amount (in thousands of dollars) | | Number | Amount (in thousands of dollars) |
| 1958—Aug. 31 | 1,528 | 3,069,199 | 1959—Feb. 28 | 1,549 | 3,117,936 |
| Sept. 30 | 1,531 | 3,071,424 | Mar. 31 | 1,550 | 3,120,486 |
| Oct. 31 | 1,538 | 3,089,224 | Apr. 30 | 1,552 | 3,128,236 |
| Nov. 30 | 1,540 | 3,090,349 | May 31 | 1,557 | 3,169,266 |
| Dec. 31 | 1,543 | 3,104,886 | June 30 | 1,557 | 3,169,911 |
| 1959—Jan. 31 | 1,548 | 3,116,486 | July 31 | 1,557 | 3,169,911 |

Eighteen percent of the number and approximately 1 percent of the amount of loans authorized consisted of loans under $100,000 while 56 percent of the number and 6 percent of the amount were under $500,000.

Eleven percent of the number and 1 percent of the amount of loans authorized were to borrowers having assets of under $100,000; 42 percent of the number and 8 percent of the amount were to borrowers having assets of under $500,000;

57 percent of the number and 12 percent of the amount were to borrowers having assets of under $1 million.

Seventy-three percent of the number and 19 percent of the amount of loans authorized were to borrowers having less than 500 employees, including employees of affiliated concerns under common ownership or control. Seventy-six percent of the number and 25 percent of the amount of loans authorized were to borrowers individually having less than 500 employees.

The following tabulation shows a breakdown of guaranteed loans authorized as of July 31, 1959, by size of loan:

*Percentage distribution of V-loans authorized through July 31, 1959, by size of loan*

| Size of loan | Percentage of guaranteed loans authorized | | Cumulative percentage distributions | |
|---|---|---|---|---|
| | Number | Amount | Number | Amount |
| Under $50,000 | 7.1 | 0.1 | 7.1 | 0.1 |
| $50,000 to $99,999 | 10.4 | .4 | 17.5 | .5 |
| $100,000 to $249,999 | 19.7 | 1.9 | 37.2 | 2.4 |
| $250,000 to $499,999 | 18.6 | 3.7 | 55.8 | 6.1 |
| $500,000 to $999,999 | 15.6 | 6.0 | 71.4 | 12.1 |
| $1,000,000 to $4,999,999 | 22.1 | 27.1 | 93.5 | 39.2 |
| $5,000,000 to $9,999,999 | 3.2 | 12.5 | 96.7 | 51.7 |
| $10,000,000 and over | 3.3 | 48.3 | 100.0 | 100.0 |

**Percentage distribution of the guaranteed loans authorized from the beginning of the program to the end of July 1959, is shown below, classified by number of employees of the borrower.**

*Percentage distribution of V-loans authorized through July 31, 1959, by number of employees of borrower*

| Number of employees [1] | Percentage of guaranteed loans authorized | | Cumulative percentage distributions | |
|---|---|---|---|---|
| | Number | Amount | Number | Amount |
| Under 25 | 8.4 | 0.5 | 8.4 | 0.5 |
| 25 to 49 | 10.5 | .8 | 18.9 | 1.3 |
| 50 to 74 | 9.1 | 1.1 | 28.0 | 2.4 |
| 75 to 99 | 7.1 | 1.2 | 35.1 | 3.6 |
| 100 to 149 | 9.5 | 1.9 | 44.6 | 5.5 |
| 150 to 249 | 13.3 | 4.4 | 57.9 | 9.9 |
| 250 to 499 | 15.4 | 8.8 | 73.3 | 18.7 |
| 500 to 999 | 10.9 | 10.6 | 84.2 | 29.3 |
| 1,000 to 2,499 | 7.1 | 13.9 | 91.3 | 43.2 |
| 2,500 and over | 5.9 | 55.2 | 97.2 | 98.4 |
| Not available | 2.8 | 1.6 | 100.0 | 100.0 |

[1] Number of employees of borrower, including affiliated concerns under common ownership or control.

| Number of employees [1] | Percentage of guaranteed loans authorized | | Cumulative percentage distributions | |
|---|---|---|---|---|
| | Number | Amount | Number | Amount |
| Under 25 | 9.2 | 3.3 | 9.2 | 3.3 |
| 25 to 49 | 11.1 | 1.2 | 20.3 | 4.5 |
| 50 to 74 | 9.9 | 1.3 | 30.2 | 5.8 |
| 75 to 99 | 7.1 | 1.2 | 37.3 | 7.0 |
| 100 to 149 | 9.0 | 1.8 | 46.3 | 8.8 |
| 150 to 249 | 13.6 | 6.0 | 59.9 | 14.8 |
| 250 to 499 | 15.6 | 9.9 | 75.5 | 24.7 |
| 500 to 999 | 10.5 | 11.3 | 86.0 | 36.0 |
| 1,000 to 2,499 | 6.0 | 13.4 | 92.0 | 49.4 |
| 2,500 and over | 4.8 | 46.0 | 96.8 | 95.4 |
| Not available | 3.2 | 4.6 | 100.0 | 100.0 |

[1] Number of employees of borrower only (not including affiliated concerns under common ownership or control).

*7. Major problems which now confront your office in carrying out mobilization programs, including the V-loan program*

None.

*8. Changes in mobilization planning and readiness measures to meet future emergencies, including the V-loan program*

The Federal Reserve Banks have plans to conduct the essential operations of the banks from relocation offices in the event of an emergency. The Reserve banks plan to continue to perform such fiscal agency functions under the V-loan program as the situation then prevailing permits.

*9. Summary of any standby programs for any future emergency*

The only Federal Reserve program authorized under the Defense Production Act is the V-loan program. Plans contemplate that the Federal Reserve banks and the Board will be prepared to participate in an expanded V-loan program suitable to any future emergency needs.

*10. Changes in organization during the past year*

None.

*11. Future objectives*

As stated in section 301 of the Defense Production Act, the objective of the guaranteed loan program continues to be "to expedite production and deliveries or services under Government contracts."

*12. Availability of funds for defense needs, including the V-loan program*

The guaranteeing agencies are authorized to use any moneys appropriated to them for defense purposes to meet any costs and expenses in connection with the V-loan program.

*13. Such other information as may appear pertinent in summarizing your mobilization activities for the past year, including the V-loan program*

On July 31, 1958, guarantee agreements outstanding totaled $500,436,000, compared with $451,838,000 outstanding on July 31, 1959, indicating that new guarantees authorized about equaled the amount of those terminated during the year. In the year ended July 31, 1959, disbursements on V-loans, most of which were revolving credits, amounted to $1,155,848,000, compared with disbursements of $707,200,000 during the preceding 12 months, showing a greater activity in the use of funds provided by the program.

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## HEALTH, EDUCATION, AND WELFARE DEPARTMENT

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE,
*Washington, December 14, 1959.*

HON. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*House of Representatives, Washington, D.C.*
(Attention: Mr. Harold J. Warren, clerk and counsel.)

DEAR MR. CHAIRMAN: In response to your request, there is enclosed for inclusion as an appendix in your committee's annual report to the Congress a selective summary of the mobilization activities in the Department of Health, Education, and Welfare under the Federal Civil Defense Act of 1950, as amended, and assignments from the Office of Civil and Defense Mobilization.

The report covers defense supporting activities of the Department and the specialized activities of its operating agencies having mobilization functions. The format of the report follows generally the guidelines set forth in your letter of August 10, 1959.

If the committee's staff have any further questions in connection with this report, they may contact Mr. Dean Snyder, Defense Coordinator, Code 181, extension 2144.

Sincerely yours,

ARTHUR S. FLEMING,
*Secretary.*

## Mobilization Activities of the Department of Health, Education, and Welfare

### 1. Mobilization Programs Conducted by the Department

The mobilization programs administered by the Department of Health, Education, and Welfare, consistent with the "National Plan for Civil Defense and Defense Mobilization," and subject to policy direction by the Office of Civil and Defense Moblization, are in the following areas of plans and readiness:

Emergency health services.
Emergency welfare services.
Emergency food and drug inspection.
Education, training, and guidance programs.
Emergency rehabilitation services for disabled survivors.
Surplus property distribution.

Operating agencies of the Department having mobilization (and civil defense) functions are:

Public Health Service.
Social Security Administration.
Food and Drug Administration.
Office of Education.
Office of Vocational Rehabilitation.
Office of Field Administration.

### 2. Authority for the Conduct of Defense Programs

Mobilization activities in DHEW have been established in accordance with the policies and directives of the Office of Civil and Defense Mobilization and its predecessor agencies. The principal authorities on which these policies and directives are based are as follows:

Federal Civil Defense Act of 1950 (Public Law 920, 81st Cong., as amended; 50 U.S.C.A. App. 2251, et seq.).
Defense Production Act of 1950 (Public Law 774, 81st Cong., as amended; 50 U.S.C.A. App. 2061, et seq.).
Executive Order 10346, dated April 17, 1952 (17 F.R. 3477).
Executive Orders 10427, 10737, dated January 6, 1953, October 29, 1957 (18 F.R. 407; 22 F.R. 8799).
The Federal Property and Administrative Services Act of 1949 (Public Law 152, 81st Cong., as amended; 40 U.S.C.A. 484(j)).
Federal Civil Defense Administration Delegations No. 1 and No. 5, approved by the President July 14, 1954, September 1, 1956 (19 F.R. 4546; 19 F.R. 6721).
Reorganization Plan No. 1 of 1958 (Public Law 85-763; 23 F.R. 4991).
Executive Order No. 10773, dated July 1, 1958 (23 F.R. 5061).
Executive Order No. 10782, dated September 6, 1958 (23 F.R. 6971).
"The National Plan for Civil Defense and Defense Mobilization."
Act creating the Federal Radiation Council (Public Law 86-373).
Executive Order 10831, dated August 14, 1959 (24 F.R. 6669).
See also DMO I-26, dated November 22, 1957, issued by the Office of Defense Mobilization, providing for the establishment and coordination of a national damage assessment program (22 F.R. 9534).

### 3. Mobilization Activities of DHEW Operating Agencies

For period September 1, 1958 to August 15, 1959

#### PUBLIC HEALTH SERVICE

*Brief statement of principal assignments*

Research, detection, and control of communicable disease, effects of biological and chemical warfare against civilians, and other health hazards. Recruitment and training of mobile Public Health Service reserve personnel to be assigned to attacked areas as needed in an emergency. Emergency restoration of community health facilities.

*Mobilization activities conducted during the year*

(*a*) Development of resource and requirement data for health, sanitation, and water-supply items which would be needed during a national emergency.

(*b*) Preparation of pertinent annexes to the "National Plan for Civil Defense and Defense Mobilization," such as the national health plan; national water plan; and national plan for chemical, biological, and radiological warfare.

(*c*) Development of an operating program to assist State and local governments establish emergency public health and medical care programs.

(*d*) Participation in interagency planning activity, such as the Medical Education for National Defense (MEND), the Committee on Essential Survival Items, Emergency Resources Advisory Committee, and the Interagency Health Advisory Board.

(*e*) Assignment of professional personnel to OCDM health services program on reimbursable detail.

(*f*) Studies on techniques to treat drinking water contaminated with radioactivity and bacteriological agents.

The Public Health Service participated actively in a large-scale survey, sponsored by Office of Civil and Defense Mobilization, to determine what consumer end products would be needed for survival in a civil defense emergency and what the supply-requirements balance would be.

Based on the survival items list, the Public Health Service, in collaboration with the Department of Commerce, determined, by actual surveys, national inventories of medical survival items. This data is now in process of being coded for the National Damage Assessment Center computers.

Advisory committees, composed of Public Health Service professional officers, developed postattack per capita requirements data for each health, sanitation, and water-supply survival item. This information is fundamental to a determination of deficiency areas where stockpiling is indicated.

*Standby capability*

Because of the organization and personnel system of the Public Health Service, there is an inherent standby capability built into its peacetime health program that could be readily utilized in an emergency. Standby orders to field headquarters establish these offices and personnel as the health operating arm of the regional OCDM offices. The commissioned reserve program of the PHS lists 4,631 professionally trained health personnel. Under the provisions of Public Law 875, as amended, the standby capability of the PHS is tested to some extent in peacetime by performing health missions during natural disasters.

### SOCIAL SECURITY ADMINISTRATION

*Brief statement of principal assignments*

Development of plans and methods for temporary financial assistance to injured or needy civilians; clothing for civilians in need as the result of attack; guidance materials for use by the States for emergency welfare and related survival services.

*Mobilization activities conducted during the year*

(*a*) Development and release to the Social Security Administration district offices pre-positioned emergency instructions by the Bureau of Old-Age and Survivors Insurance.

(*b*) Development of a list of survival items designed to improve the statistical base for making informed supply-requirements analyses of survival items in the welfare field.

(*c*) Preparation for the expansion of mobilization assignments in the field of welfare in anticipation of the proposed Executive order delegating to the Department total welfare services in relation to feeding, lodging, clothing, registration, locating and reuniting families, and other emergency welfare service functions related to civil defense mobilization.

(*d*) Preparation of an annex on "Emergency Welfare Services" to the "National Plan for Civil and Defense Mobilization."

*Standby capability*

The Social Security Administration's programs are carried out through a nationwide system of decentralized regional and district offices for the federally administered old-age and survivors insurance program and through State departments of welfare for the grant-in-aid programs. These offices and personnel

constitute the operating organization which would serve as the welfare arm of the Office of Civil and Defense Mobilization in the event of an attack upon the United States.

Brief descriptions of the Social Security Administration's standby programs are outlined below:

*Operating programs*

1. Temporary service and aid to citizens necessitated by enemy action or possibility of action and provision for civilian war benefits.
   (*a*) Emergency welfare services.
   (*b*) Survival benefits.
   (*c*) Service and assistance to stranded nonresident families and individuals near Army installations and war industries for whom no other community service is available.
   (*d*) Assisting in relocation.
   (*e*) Emergency assistance to repatriates.
2. Services and assistance to enemy aliens and others affected by restrictive governmental action.
   (*a*) To meet emergency needs of dependents of aliens interned by the Government.
   (*b*) To meet emergency needs of persons restricted by governmental action from continuing to live in certain places of strategic importance.
   (*c*) To meet emergency needs of aliens moved from another country to this country by our Government's plan.

FOOD AND DRUG ADMINISTRATION

*Brief statement of principal assignments*

Provision for extraordinary food and drug inspection and control in attacked areas.

*Mobilization activities conducted during the year*

None.

Three Food and Drug Administration civil defense programs, viz, food test; training; and effect of biological warfare on foods and drugs were terminated in June 1957, for lack of funds.

*Future objectives*

Conduct training courses for Federal, State, and local food and drug officials and staff of the regulated industries with information on how to deal with problems of contamination of food and drug supplies that may survive a chemical, biological, or nuclear attack, including decontamination procedures and radiological monitoring with technical equipment.

Conduct a research program to determine the vulnerability of wholesale and retail packages of food and drugs to biological agents introduced during overt or covert attacks, and to determine decontamination procedures.

OFFICE OF EDUCATION

*Brief statement of principal assignments*

Guidance for shelter and protective measures for schools and hospitals. Training materials in civil defense skills and behavior for school curriculum use.

*Mobilization activities conducted during the year*

Some staff work was continued in developing and distributing new civil defense educational materials for teaching the concepts of self-preservation against disaster, and revising already existing materials adaptable for classroom use.

In cooperation with the Office of Civil and Defense Mobilization, the Office of Education worked out a formula whereby 200 kits of radiological instruments were equitably distributed to colleges and universities throughout the country.

Appointment by the Commissioner of Education of a six-member Emergency Operations Committee for providing national direction and assistance to the States and local communities in the area of civil defense educational planning.

OFFICE OF VOCATIONAL REHABILITATION

*Brief statement of principal assignments*

Guidance for an integrated national program for the rehabilitation of disabled survivors and, working with other Federal departments and agencies, provide for extending guidance and technical assistance to State vocational rehabilitation agencies and other public and voluntary organizations and agencies concerned with the rehabilitation of disabled persons under all conditions of national emergency.

*Mobilization activities conducted during the year*

There was no program activity during the year due to lack of funds.

*Future objectives*

Further refinement and development of plans for the rehabilitation of disabled survivors.

Develop a coordinated plan for the emergency use of rehabilitation resources; develop requirements, expedients and priorities for equipment, supplies, personnel and facilities required to assure minimum essential services under all conditions of national emergency.

OFFICE OF FIELD ADMINISTRATION

*Brief statement of principal assignment*

Under provisions of the Federal Property and Administrative Services Act of 1949 (as amended), the Department allocated Federal surplus property for utilization by health and educational institutions. In addition, the Office of Civil and Defense Mobilization delegated to the Department administrative operation of the civil defense surplus property donation program, thus utilizing an existing system. To establish eligibility for receipt of surplus property allocations, State agencies are required to submit operating plans to DHEW.

*Mobilization activities conducted during the year*

During the past year surplus property with a Government acquisition cost of $48,057,819 was donated for civil defense purposes.

A special program—"machine tools for schools"—was promoted for the purpose of transferring surplus machine tools to educational institutions in order to strengthen national defense by training workers for industry. During the year, 10,031 tools, with a Government acquisition cost of $17,639,545, were donated to educational institutions.

These activities were financed from direct appropriations to the Surplus Property Utilization Division, which amounted to $687,000 for fiscal year 1959.

### 4. Emergency Administrative Support

*DHEW "Emergency Planning and Operations" manual.*—During the past year, the Department initiated work on a departmental staff manual, "Emergency Planning and Operations." When completed, the document will contain standby emergency administrative orders and instructions that will provide the authority and procedures for realinement of functions within the Department in order to carry out its responsibilities in the event of an attack upon the United States. In addition, the document will contain the objectives to be attained through current and future programing, budgetary, and other preparatory activities.

*DHEW relocation sites.*—As part of the Government-wide plan, the Department maintains emergency relocation sites for headquarters use during test exercises and Operations Alert, or in the event of an actual emergency. Each regional office also has a relocation site.

*OCDM relocation site.*—During the year, the Department maintained a rotating cadre of four persons at the OCDM site for readiness training. A total of 160 different individuals served on the DHEW cadre during this period. Other key officials have visited the site for shorter periods. On October 27, 1959, the Secretary approved the assignment of a full-time DHEW representative to this site.

*Interagency mobilization committees.*—The Department is represented on, and participates in, the decisions of the Civil and Defense Mobilization Board. DHEW also serves on many OCDM planning committees and working groups, such as the Interagency Test Planning Group, the Manpower Policy Committee, Interagency Committee on Radiological Defense, and others.

### 5. Emergency Planning Activities

*Operation Alert 1959.*—The Department participated actively in all phases of the exercise. During the national relocation phase, August 24 through August 28, DHEW was represented by approximately 100 employees from the headquarters office in Washington. Following the exercise, an evaluation report was prepared listing significant problems of concern to the Department, with recommendations also to OCDM for joint study and solution.

*"The National Plan for Civil Defense and Defense Mobilization."*—The Department's operating agencies have participated actively in the development of supporting annexes to the national plan. Fifteen of the 40 annexes have been issued; 38 have been presented to this Department for review and comment.

*National Damage Assessment Center.*—The Department has maintained working relationships with the OCDM National Damage Assessment Center in an effort to improve the quality and quantity of data for damage assessment. During the past year, a full-time DHEW representative was stationed at NDAC.

*Health and welfare delegations.*—Last year, the committee was informed that Executive orders were being prepared delegating expanded civil defense responsibilities to the Secretary of Health, Education, and Welfare. These are two of several proposed orders assigning mobilization functions to various departments and agencies of Government. Clearance of these orders has required a considerable period of time. When finally issued, the Department is prepared to accept the responsibilities imposed and is already developing initial plans for its emergency assignments in the light of the anticipated orders. The Department has a unique capability to do this by reason of its professional competence, its regional and field structure, and its relationship with State and local counterparts, both public and private.

### 6. Changes in Organization

During the past year, special attention has been directed to the "tooling up" for assumption of full-scale responsibility under the proposed Executive orders.

In the *Public Health Service* a Division of Health Mobilization was created on May 1, 1959. This Division is responsible for conducting a national health mobiliaztion program covering health services in an emergency and for providing guidance and assistance to the States and communities with the health and medical aspects of their disaster preparedness plans.

In the Bureau of Public Assistance (SSA) a Working Group on Defense Planning Activities was established with the objective of orderly integration of civil defense planning activities into the total Bureau structure.

### 7. Availability of Funds for Defense Needs

Since no funds are made available specifically for mobilization activities, except under delegations from the Office of Civil and Defense Mobilization, personnel, and facilities of the Department's existing organization are utilized in a limited way for continuity of Government planning.

Funds requested of the Congress for delegate agency functions during fiscal year 1959 were severely reduced. Allocation of OCDM funds to the Department totaled $80,000, as compared with planned programs for which an estimate of $820,000 had been made. The allowance of $80,000 was distributed as follows and used for limited staff supplementation:

| | |
|---|---|
| Emergency health services | $14,000 |
| Emergency welfare services | 24,700 |
| Food and drug activities | 11,700 |
| Field planning | 11,700 |
| Executive direction and coordination | 17,900 |
| Total | 80,000 |

In the matter of fund availability, the following is quoted from the Department's evaluation report prepared during Operation Alert in August 1959:

"The exercise provided headquarters and regional staffs with the best opportunity to date to consider the nature and extent of departmental responsibilities in a postattack situation and to evaluate DHEW readiness to carry them out. DHEW functions and responsibilities have been identified and clarified and substantial development of emergency plans have taken place at headquarters and

regional levels. OPAL 1959 has made it clear, however, that if DHEW is to perform its emergency functions in an adequate manner, it will involve a tremendous job of training and organization of State and Federal personnel. If these personnel are not trained and organizationally manageable, the Department cannot function effectively in a postattack situation. This training and organization job is of such magnitude that it cannot be undertaken as an additional duty by staff already fully committed to other functions. It will require special staff and more adequate financing."

## EXPORT-IMPORT BANK

EXPORT-IMPORT BANK OF WASHINGTON,
*Washington, D.C., August 21, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Old Senate Office Building, Washington, D.C.*
(Attention: Mr. Harold J. Warren, clerk and counsel.)

DEAR MR. BROWN: I am pleased to enclose the information pertaining to the operations of the Bank under the Defense Production Act during the past year, as requested in your letter of August 10, 1959.

In the event any further information is desired, I shall be happy to furnish it.

Very sincerely,

SAMUEL C. WAUGH, *President.*

Enclosure.

### LENDING ACTIVITIES OF THE EXPORT-IMPORT BANK UNDER THE DEFENSE PRODUCTION ACT

The Export-Import Bank was named in section 311(a) of Executive Order No. 10161, as amended by Executive Order No. 10281 of August 28, 1951, as the agency designated to make and administer all loans under section 302 of the Defense Production Act of 1950, as amended, where the expansion, development, or production so financed is carried on in foreign countries. Executive Order No. 10480 of August 15, 1953, which superseded the above orders, retained section 311 unchanged, except for inclusion of the additional authority to guarantee loans for expansion, development, or production in foreign countries. By means of the credits authorized, new sources have been provided of copper, cobalt, manganese, molybdenum, and zinc for the U.S. stockpile or use by U.S. industry.

The Bank has the responsibility for all financial aspects of loans made under section 302 of the Defense Production Act of 1950, as amended, for activities carried on in foreign countries. Such loans are made by the Bank only upon a certificate of essentiality of the loan issued by the Director of Civil and Defense Mobilization or the General Services Administration.

Funds disbursed under these loans are made available to the Bank by allocations, from the Office of Civil and Defense Mobilization, to borrow from the Treasury Department under the authority contained in section 304 of the Defense Production Act of 1950, as amended. Amounts allocated for this purpose reached a maximum of $135 million on February 16, 1953, and subsequent reductions were made to $50 million on February 4, 1954, $35 million on June 20, 1958, $27.5 million on December 23, 1958, and $25.5 million on July 23, 1959.

Letters of understanding have been exchanged with the Director of Civil and Defense Mobilization and the Defense Materials Procurement Administrator, now succeeded by the General Services Administrator, recognizing and expressing the cooperative relationship existing with the Bank in the conduct of these lending operations abroad.

No certificates of essentiality have been received and no new loans have been authorized since June 30, 1953. All defense production loans of Eximbank were fully disbursed as of January 30, 1957. Eximbank has disbursed $45.2 million and collected as repayments on these loans $16.8 million. No additional credit authorizations by the Bank under the Defense Production Act are contemplated in the future, and the operations will consist solely in the administration and collection of the loans already made.

## EXIMBANK DEFENSE PRODUCTION LOANS

### *Summary of lending operations*

[In thousands of dollars]

| Country, obligor, and product | Credits previously authorized | Operations during fiscal year ending June 30, 1959 | | | Unpaid loan balance outstanding June 30, 1959 |
|---|---|---|---|---|---|
| | | Amount disbursed | Principal repaid | Interest collected | |
| Brazil: Industria e Comercio de Minerios, S.A., manganese | [1] $16,283.0 | [2] $48.2 | | $754.9 | $16,331.2 |
| Haiti: Cotes de Fer Corp., sisal | 202.3 | | | | 31.9 |
| Mexico: Zinc Nacional, S.A., zinc | 337.5 | | | | 0 |
| Canada: | | | | | |
| Campbell Chibougamau Mines, Ltd., copper | 5,500.0 | | | | 0 |
| Molybdenite Corp. of Canada, Ltd., molybdenum | 540.0 | | | | 0 |
| Africa, Northern Rhodesia: Rhodesia Congo Border Power Corp., Ltd., copper and cobalt | 22,400.0 | | 4,049.6 | 747.0 | 12,010.3 |
| Total | 45,262.8 | 48.2 | 4,049.6 | 1,501.9 | 28,373.4 |

[1] Being that part of $71,346.3 credit authorized Sept. 4, 1952, certified to Eximbank by DMPA, $55,063.3 of which is a direct loan by Eximbank.
[2] Unpaid interest capitalized and added to indebtedness of borrower.

### *Summary of operating results by fiscal years*

| Fiscal year | Income | Total expenses | Net income | Fiscal year | Income | Total expenses | Net income |
|---|---|---|---|---|---|---|---|
| 1952 | $706 | $280 | $426 | 1957 | $1,719,772 | $913,404 | $806,368 |
| 1953 | 10,996 | 4,431 | 6,565 | 1958 | 1,672,280 | 857,223 | 815,057 |
| 1954 | 315,086 | 176,926 | 138,160 | 1959 | 1,465,377 | 701,580 | 763,797 |
| 1955 | 916,961 | 462,294 | 454,667 | | | | |
| 1956 | 1,258,972 | 639,005 | 619,967 | Total | 7,360,150 | 3,755,143 | 3,605,007 |

### *Estimated future liquidation*

[In thousands of dollars]

| Fiscal year | Receipts | Expenditures | Cumulative net expenditure (credit (−)) |
|---|---|---|---|
| 1960 | $5,759.0 | $792.0 | $19,700.2 |
| 1961 | 5,535.0 | 552.0 | 14,717.2 |
| 1962 | 3,881.3 | 402.0 | 11,237.9 |
| 1963 | 7,585.0 | 241.5 | 3,894.4 |
| 1964 | 7,570.0 | 51.5 | −3,624.1 |
| 1965 | 2,053.7 | 1.5 | −5,676.3 |

NOTE.—The above tabulation presents a forecast of operations relating to the repayment of the defense production loans administered by Eximbank. Although the assumption was the same as for the other lending agencies, namely, that no probable ultimate net cost to the U.S. Government would result, it appears probable that a net profit of $5,676,300 will be ultimately realized upon completion of the collection of Eximbank's loans in fiscal year 1965. Upon final liquidation of these loans, Eximbank will have paid all net income to the U.S. Treasury.

**The Bank is furthering its plans and preparations for the continuity of essential functions and the performance of mobilization functions in the event of an emergency, pursuant to authority given in a letter from the Director of the Office of Defense Mobilization dated September 6, 1957. Accomplishments under this program are set out below:**

**1. Establishment of a relocation site where the Bank's indispensable records are stored and where, in cooperation with the Department of State, the Bank's emergency functions can best be performed.**

**2. Establishment of an emergency order of succession of management.**

3. Designation of the key officials who would staff the relocation site when deemed appropriate to do so.

4. Designation of the additional personnel required to support the Bank's operations administratively at the relocation site in an emergency.

5. Designation of officials responsible for liaison with the Office of Civil and Defense Mobilization, for the logistical aspects of emergency relocation planning, and for the program and functional aspects of the Bank's emergency mission.

6. Participation at the Bank's relocation site in the national phases of Operation Alert, 1958 and 1959.

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## HOME LOAN BANK BOARD

FEDERAL HOME LOAN BANK BOARD,
*Washington, D.C., September 9, 1959.*

CHAIRMAN, JOINT COMMITTEE ON DEFENSE PRODUCTION,
*Old Senate Office Building, Washington, D.C.*
(Attention of Mr. Harold J. Warren, clerk and counsel.)

DEAR MR. CHAIRMAN: In reply to your letter of August 10, 1959, the Federal Home Loan Bank Board submits the following summary of its operations under the Defense Production Act for the year ending August 15, 1959:

1. The Federal Home Loan Bank Board (hereinafter referred to as the Bank Board) is responsible for the development of national security preparedness measures relating to savings and loan credit policies and programs. The Bank Board cooperates in this work with the Federal Reserve Board to the extent necessary to reflect Bank Board views and insure general coordination of savings and loan credit policies and programs with basic national policies under conditions of mobilization. Likewise, with the cooperation of the Department of the Treasury, it is the responsibility of the Bank Board to develop national security preparedness programs relating to the operations of the Federal Home Loan Bank System (hereinafter referred to as the Bank System).

2. The authority from which the Bank Board derives its powers for such programs is Defense Mobilization Order I–22, dated March 28, 1956.

3. Among the measures for which the Bank Board is responsible are the following:

(*a*) Development of plans and regulations with respect to the Bank System for appropriate general and selective credit controls to curb inflationary pressures during various types of mobilization emergencies.

(*b*) Preparation, in cooperation with the Department of the Treasury, of plans for availability of savings and the provision for essential credit to the members of the Bank System under conditions of attack.

(*c*) Development of plans to encourage preparedness measures by the members of the Bank System designed to support continuity of operations of the System in the event of enemy attack, including the preservation of essential records.

(*d*) Development and maintenance of specific plans to assure the continuity of the essential functions of the Bank System in the event of an attack on the United States.

Such preparedness measures have been undertaken on a basis consistent with defense mobilization assumptions and objectives for the Government as a whole. To assure such consistency and coordinated planning, proposed programs are submitted to the Director of the Office of Civil and Defense Mobilization or developed jointly.

4. Effectiveness of the programs: The Federal Home Loan Bank Board's nine emergency regulations as published in the Emeregency Federal Register (vol. 24, OPAL 59, No. 4) are designed, among other things, to restrict withdrawals from savings and loan institutions and to control improper use of credit. The Board's supervisory agent in each Federal home loan bank district, under these emergency regulations, is authorized to select and authorize savings and loan associations not incapacitated or made inaccessible by attack to act as paying and receiving agents for savings and loan associations which have been so incapacitated or made inaccessible.

A relocation committee from the Federal Home Loan Bank Board staff, under the direction of the Board, planned and supervised the preparedness activities during 1959. The Federal home loan banks' special committee on mobilization preparedness assisted materially in the development of plans for assuring the

continuity of the essential functions of the Federal Home Loan Bank System in the event of an emergency. In further cooperation with the Board, each Federal home loan bank has appointed a mobilization preparedness district committee to encourage preparedness measures by member institutions.

The Federal Home Loan Bank Board and each of its 11 regional Federal home loan banks, as well as many member institutions, have established alternate headquarters or relocation sites and have provided for succession of officers, preservation of records, and for operations in the event of a national emergency.

In June of 1959 the Federal Home Loan Bank Board published a "Preparedness Guidelines for Emergency Savings and Loan Operations." Copies were issued to the regional Federal home loan banks and to each of the 5,000 member institutions of the Federal Home Loan Bank System. Copies were also made available to State savings and loan supervisors; National, State, and regional savings and loan leagues; and to the national office and regional directors of the Office of Civil and Defense Mobilization.

"Preparedness Guidelines" sets out the responsibilities for national preparedness and suggests steps to be taken by member institutions in (1) protection and preservation of essential records, (2) provision for alternate headquarters and continuity of management, and (3) protection of personnel.

The Federal Home Loan Bank Board participated in the national damage assessment program through the submission of information received from the member institutions of the Federal Home Loan Bank System.

The Federal Home Loan Bank Board and its regional banks actively participated in the 1959 national Operation Alert exercises. The Board and its regional banks worked in close cooperation with local and national officials of the Office of Civil and Defense Mobilization in an effort to carry out the defense responsibilities assigned to the Federal Home Loan Bank Board.

5. The current need for these programs is to prepare the savings and loan industry for defense mobilization in concert with the program of continuity of Government operations.

6. The Bank Board has no programs related to small business.

7. Major problems confronting the Bank Board in carrying out mobilization programs are the absence of determination and announcement by the Federal Government that it will—

(*a*) Make available sufficient currency or its equivalent to surviving financial institutions, including savings and loan associations, to enable them to operate within the framework of such emergency regulations as have been and may be promulgated.

(*b*) Indemnify such institutions as least against losses incurred as the result of payments made, as receiving and paying agents, to holders of savings accounts in incapacitated or inaccessible institutions.

(*c*) Sustain the Federal Savings and Loan Insurance Corporation in meeting its insurance obligations.

8. Changes in mobilization planning and readiness measures to meet future emergencies could be improved through wider and more advanced dissemination of damage assessment data to field elements.

The regional Federal home loan banks have in the past operated from their home offices under assumed relocation site conditions. Operation of regional Federal home loan banks from actual relocation sites, which is anticipated in the future, will be a better test of operational capability.

9. The programs outlined in Nos. 1 and 3 above are standby programs and would be activated only in the event of emergency. Thus, the Board has planned and prepared for the continunity of its operations should an emergency occur.

10. The Federal Home Loan Bank Board has made no organizational changes during the past year.

11. Future objectives:

(*a*) Finance: A proclamation, an Executive order, or the establishment of a new corporation which would provide for solvency and indemnification by the Federal Government of all financial institutions during an emergency.

(*b*) Physical safety: The structure of buildings presently occupied by the Bank Board at its relocation site would not withstand attack conditions. Operational capability would be improved by construction of specially designed attack-proof buildings or shelters; provision of adequate emergency supplies, such as food, water, and medical supplies; consideration of the welfare of families of personnel assigned to relocation sites during an emergency; and wider cooperation and coordination of Federal, State, and local facilities.

(c) General: Emphasis will be made on the permanent or continuing nature of mobilization preparedness and on wider participation in preparedness planning by member institutions of the Federal Home Loan Bank System.

The Bank Board will continue to encourge the resolving by the Federal Government of questions relating to the economic stabilization of the Nation—particularly recommending that provision be made for guarantees of solvency and indemnification by the Federal Government of all financial institutions during emergency periods.

Greater progress could be attained with respect to economic stabilization financial) if each Federal home loan bank had representation on the respective regional boards of the Office of Civil and Defense Mobilization.

In the near future all levels—department and field—should be fully informed and capable of operating from relocation sites in a unified program.

12. Up to the present time it has not been necessary for the Board to request a special authorization of funds for defense needs. Funds to date for these expenses have been obtained directly or indirectly from the Savings and Loan Industry.

Very truly yours,

HARRY W. CAULSEN,
*Secretary.*

## HOUSING AND HOME FINANCE AGENCY

HOUSING AND HOME FINANCE AGENCY,
OFFICE OF THE ADMINISTRATOR,
*Washington, D. C., September 4, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Old Senate Office Building, Washington, D.C.*
(Attention: Mr. Harold J. Warren, clerk and counsel.)

DEAR MR. CHAIRMAN: This letter is in response to your request of August 10, 1959, for a summary of the mobilization activities of the Housing and Home Finance Agency for the past year. We assume that in accordance with established precedent the joint committee desires the Agency's report to include all major defense mobilization and civil defense activities carried on by the Housing and Home Finance Agency

The Housing and Home Finance Agency's authority in these areas is derived from Defense Mobilization Order I–14, issued by the Office of Defense Mobilization on November 26, 1954, and the responsibilities assigned to the Agency by the Federal Civil Defense Administration under FCDA Delegation No. 2, dated August 19, 1954, as clarified in a memorandum of understanding between the Federal Civil Defense Administration and the Housing and Home Finance Agency signed January 23, 1957. Since the issuance of DMO I–14 and FCDA Delegation No. 2, the Office of Defense Mobilization and the Federal Civil Defense Administration have been merged to form a new Agency designated as the Office of Civil and Defense Mobilization. The delegations of authority and responsibilities previously issued have been continued in effect by the Director of the Office of Civil and Defense Mobilization.

The Administrator is responsible for the development and administration of measures relating to housing and those community facilities for which the Agency has responsibility. This includes programs for the construction, repair, rehabilitation, and management of housing; determination of requirements and resources therefor; development of a locally administered billeting program; guidance to States and communities as to standards and priorities for emergency lodging and housing programs; plans for the selection, acquisition, development and disposal of sites for housing, related service buildings and community facilities for new, restored or relocated communities; restoration of emergency community facilities; determination of the requirements and resources therefor; plans for the control and allocation of building materials and equipment for housing construction and community facilities; programs for financing and allocation of housing and financing community facilities; participation in an advisory capacity in the development and administration of a general economic and financial stabilization program (including rent and real estate price controls), and plans to insure the continuity of essential HHFA functions.

In view of the continued state of tension throughout the world, the need for developing a state of operational readiness is evident. The ratio of damage to and destruction of housing and community facilities because of their immobility will be appreciably greater than the rate of casualties among the population. It appears, therefore, that the programs of the Housing and Home Finance Agency are essential and an integral part of the overall plan for national survival.

In the past year the Agency has made some progress in the accomplishment of its responsibilities. The principal ones are as follows:

1. The Housing Agency was able to prepare two plans: (*a*) A plan for emergency lodging and billeting; and (*b*) a plan for a part of the emergency housing construction program.

2. A housing annex to the National Plan for Civil Defense and Defense Mobilization was prepared.

3. Meetings were conducted in each HHFA region to inform and instruct the Agency's field staffs and executive reservists of the latest developments and preparations in civil defense fields.

4. The Executive Reserve Corps of the Agency was increased to 24 members by the appointment of four additional reservists.

5. A permanent staff was designated to serve at the OCDM classified relocation site as ordered by the President. This staff (the Director of the Defense Planning Branch plus professional personnel from constituent agencies on a rotation basis) has maintained an on-duty status 7 days a week, 24 hours per day.

6. Delegations of authority were issued and operational instructions are under preparation for predispositioning in the field for use in a civil defense emergency.

The Housing Agency has cooperated with OCDM in the development of programs for the provision of emergency shelters. The Federal Housing Administration has issued instructions providing for the financing of bomb shelters under the provision of title I of the National Housing Act. The Urban Renewal Administration has issued instructions to the effect that the costs of public fallout shelters in urban renewal projects found by local public agencies to be necessary for carrying out the projects which the shelters will serve may be acceptable as noncash local grants-in-aid, provided that the structures meet standards acceptable to the Office of Civil and Defense Mobilization, and subject to the usual requirements for determining the eligibility of specific facilities and for approprate prorations where other areas will also be served.

Nothwithstanding the progress detailed above, much remains to be done for the Housing Agency to achieve a state of operational readiness. Further detailed planning is required in connection with the following projects:

1. The organizational structure for the headquarters office and field down to the lowest operational level must be devised, including staff requirements, regulations, procedures, etc.

2. A program must be developed for the urgent repair of damaged housing and for the construction of new housing.

3. A program must be prepared for the urgent restoration and repair of emergency community facilities and the installation of new facilities.

4. Studies must be conducted on economic stabilization measures pertaining to real estate credit controls and rent stabilization.

5. Regulations and procedures must be developed in connection with the allocation of housing and community facilities materials and equipment.

6. Courses and seminars must be conducted for the training of the staffs of our own Agency, the executive reservists, and related segments of the State and local civil defense organizations.

The regular appropriations for the Housing and Home Finance Agency do not cover the civil defense and defense mobilization functions. The two technical plans completed in the past year (the plan for emergency lodging and billeting and the plan for emergency housing construction) were developed pursuant to a special agreement with OCDM which provided HHFA with $60,000 for their accomplishment. The Agency will, however, need additional staff if it is to undertake the remaining programs described above. Unless funds are reecived to cover the costs, the Housing Agency will not be able to complete its civil defense and defense mobilization assignments.

Sincerely yours,

NORMAN P. MASON, *Administrator.*

## ATOMIC ENERGY COMMISSION

U.S. ATOMIC ENERGY COMMISSION,
*Washington, D.C., September 15, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Congress of the United States.*
(Attention: Mr. Harold J. Warren, clerk and counsel.)

DEAR MR. BROWN: This is in reply to your August 10, 1959, letter to Chairman McCone which requested a brief summary of the operations of the Atomic Energy Commission for the past year under the Defense Production Act. This report is to be included in the Ninth Annual Report of the Joint Committee on Defense Production to the Congress.

### PRIORITIES AND ALLOCATIONS

The Business and Defense Services Administration (formerly NPA) Delegation 2, as amended, July 27, 1951, delegated (with power of redelegation) priorities and allocations authority to the Atomic Energy Commission. The delegation authorized the AEC to apply ratings and allotment numbers, as appropriate, on orders for delivery of products and materials needed for the accomplishment of approved programs; to assign to others (contractors) the right to use ratings and allotment numbers on purchases for the account of the AEC; and to provide priorities and allocations assistance to other AEC contractors, except suppliers of electric power services, for use in connection with certain procurement for their own account.

The rules and regulations issued by BDSA require identification of all purchase orders for materials needed to meet AEC contracts and subcontracts. This requirement is mandatory and not optional. Accordingly, rated orders or authorized controlled materials orders, as appropriate, are used for all procurement by or for the account of the AEC of products and materials that are subject to the provisions of the priorities and allocations system.

DX ratings are used to identify orders for those programs designated as eligible for DX program rating by the Director of the Office of Civil and Defense Mobilization (OCDM) and DO ratings are used for the other AEC programs.

The priorities and allocations system is administered within the AEC in accordance with AEC priorities and allocations series bulletins and supplements issued to all offices and divisions, headquarters, and to managers of operations. These bulletins establish basic AEC policies and procedures and implement BDSA policies and procedures.

The AEC contractors develop estimates of controlled materials which are reviewed for reality and time phasing by the operations offices prior to submittal to headquarters. Headquarters coordinates the program and presents the AEC requests for allotments to OCDM.

Upon receipt of the allotments from OCDM, distribution is made to operations offices and other elements of AEC that are responsible for placing delivery orders for products and materials for AEC programs.

Allotment accounts are maintained throughout the AEC to assure that allotment usage does not exceed the allotments received.

Under DMS, the AEC is the claimant agency before the OCDM for allotments of controlled materials for its own programs, and by designation from OCDM and BDSA, the AEC is also the claimant agency for the Canadian atomic energy program. The BDSA is the allotting agency for the latter program.

The priorities and allocations system has been extremely helpful in providing preferential treatment to AEC orders for materials and products. However, occasions do arise when the AEC or its contractors experience difficulties in placing orders or in obtaining required deliveries on schedule. In such cases, if AEC efforts to resolve the problems involved are unsuccessful, special assistance is requested from BDSA. In rendering this assistance, BDSA may issue a specific DX rating or directive on the supplier.

### ASSISTANCE TO SMALL BUSINESS

*Authority*

AEC has established small-business policies and program requirements in order to discharge its responsibility to small business pursuant to the authority of

the Small Business Act and the Defense Production Act of 1950, as amended. Since AEC is concerned with the construction and operation by cost contractors of chemical and metallurgical plants and research facilities of various types, the AEC small-business program, while it includes prime contracts, is focused primarily on the subcontract actions of its cost contractors.

*Summaries of activities*

AEC operations and contractor purchasing offices continue to maintain and operate small-business programs, as required by AEC policies, to insure that small business receives a maximum practicable opportunity to participate in procurements that are suitable for small business. The maintenance of a cooperative working relationship with the Small Business Administration is an important feature of AEC small-business programs. The continued effective operation of these programs has been ascertained through periodic management reviews, quarterly small-business reports of purchasing office activities and quarterly statistical reports of prime and subcontract awards to small business. The names of a substantial number of additional small-business suppliers of goods and services are continually being added to the source lists of AEC operations and contractor purchasing offices. Small-business concerns are participating in a majority of the contract actions which are suitable for small business and are receiving a substantial number and dollar volume of the related subcontract awards. In fiscal year 1959, 42 percent of the $571.1 million total AEC subcontract dollars went to small business. This represents an increase over the 39.3 percent figure for fiscal year 1958.

*V-loan program*

During fiscal year 1959 the AEC extended for 1 year the maturity of a guaranteed loan. The same AEC guarantee subsequently was superseded by a guarantee by the Department of the Navy, since the Navy then had a predominant interest in the borrower's uncompleted defense contracts. On June 30, 1959, the AEC had only two outstanding V-Loan guarantees. Both are facilities loans, one with unliquidated balance of $1,996,631 with a 70-percent guarantee, the other with a balance of $955,141 and a 95-percent guarantee. Both are being liquidated according to schedule.

*Accelerated tax amortization*

The Office of Civil and Defense Mobilization refers to AEC for evaluation and comment certain applications and other matters relating to certificates of necessity. During fiscal year 1959 AEC commented to OCDM on six such matters.

MOBILIZATION READINESS ACTIVITIES

AEC augmented its participation in the Office of Civil and Defense Mobilization activities, both at the regional and the headquarters levels. Representation on regional Civil and Defense Mobilization Boards was formalized and one of the AEC Commissioners was designated to represent AEC on the national Civil and Defense Mobilization Board.

The agency assisted in the development of the national plan for civil defense and defense mobilization and various annexes thereto, participated with other agencies in the modification of Federal emergency plans and implemented changes to plans within AEC. Internal standby instructions were issued based on emergency standby regulations and orders of the Office of Civil and Defense Mobilization and the Business and Defense Services Administration.

Representation was provided on interagency committees which planned for all phases of Operation Alert 1959. Emergency operations plans were tested from AEC field and headquarters relocation centers as part of this exercise.

Mobilization base planning was maintained on a current basis by the addition of alternate suppliers to the mobilization base planning list.

Adjustments were made in the number of AEC-owned machine tools reported to the defense mobilization production equipment inventory to reflect additions of idle tools eligible for retention and withdrawals of tools required for immediate use. Surplus machine tools and production equipment were reported to OCDM and upon selection for inclusion in the national industrial equipment reserve were made available to the Department of Defense for this purpose.

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Additional data was furnished to the National Damage Assessment Center thereby increasing twofold the list of AEC installations and key suppliers on file with the NDAC. This will enable AEC to obtain basic information about these installations and suppliers, in the event of a real or simulated attack.

Sincerely yours,

JOHN A. DERRY,
*Director, Division of Construction and Supply.*

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## SMALL BUSINESS ADMINISTRATION

SMALL BUSINESS ADMINISTRATION,
*Washington, D.C., September 18, 1959.*

Hon. PAUL BROWN,
*Chairman, Joint Committee on Defense Production,*
*Senate Office Building, Washington, D.C.*
(Attention of Mr. Harold J. Warren, clerk and counsel.)

DEAR MR. BROWN: Thank you for your letter of August 10, 1959, with regard to the Ninth Annual Report of the Joint Committee on Defense Production. I am happy to have the opportunity to submit the enclosed report of this agency's activities relating to the administration and execution of the mobilization program.

This agency is aware of the importance of small business in a successful defense mobilization program and is making every effort, within our present legislative authority and programs, to encourage small-business enterprise to make the greatest possible contribution toward the objectives of the Defense Production Act. Also, we are constantly bringing the role that small business must play, in case of emergency, to the attention of those agencies having the primary responsibility for the planning of the defense mobilization program.

Sincerely yours,

WENDELL B. BARNES,
*Administrator.*

Enclosure.

### REPORT ON ACTIVITIES OF ADMINISTRATION AND EXECUTION OF MOBILIZATION PROGRAM, SEPTEMBER 15, 1959

#### INTRODUCTION

In the foreword to the Small Business Act, the Senate Select Committee on Small Business stated: * * * "Congress has now made it clear that independent small-business enterprises are to be considered as one of this Nation's invaluable resources—as essential to our strength as are our fertile farmlands, timber, mines, and waterway systems." Conservation of resources requires care and vision. Technical and managerial proficiency are not patented skills—they require development and expanding.

As time and progress advance, so must small business accommodate its basic structure and planning to the requisite of the space age. The intricate elements of military preparedness place greater and greater demands on the industrial complex of the Nation, and with assistance and guidance, the small-business community can and has met this challenge. The Small Business Administration is ever mindful of its responsibility to small business and to the Nation.

#### CIVIL DEFENSE AND DEFENSE MOBILIZATION PROGRAM ACTIVITIES

*Responsibility*

The Administrator of the Small Business Administration is responsible for developing and recommending plans and programs designed to assure the maximum utilization of the productive facilities and capabilities of small-business concerns in carrying out mobilization programs, including mobilization under the conditions of an attack on the United States.

Specifically the Administrator will—

(*a*) obtain information on the productive capabilities of small business to contribute to mobilization programs;

(*b*) consult and cooperate with other delegate agencies in developing mobilization plans and procedures designed to plan the productive facilities of small business to bear on mobilization requirements;

(*c*) assist other delegate agencies in providing guidance and leadership to small business in taking necessary actions to insure their ability to participate in mobilization readiness programs;

(*d*) develop and maintain specific plans to assure the continuity of the essential functions of the Small Business Administration in the event of an attack on the United States;

(*e*) Cooperate with the Office of Civil and Defense Mobilization in developing a method of assessing damage sustained by the small business productive facilities of the Nation in the event of an attack and the capability remaining available for mobilization purposes; and

(*f*) Counsel small business on financing war production, conversion to war production and essential civilian activities. Also make loans to small business to finance business construction, conversion, or expansion; to finance the purchase of equipment, facilities, machinery, supplies, or materials; and to supply working capital.

*Continuity of direction and control of the Small Business Administration*

During the past fiscal year, the Office of Organization and Management, Small Business Administration, has placed great emphasis on phases for the preservation of continuity of control and direction of the Agency, and for integrating defense plans and functions into the existing Small Business Administration structure. This policy has resulted in the continuous review of the Small Business Administration standard operating procedure, with appropriate changes thereto when necessary.

*Program philosophy*

The Small Business Administration's program philosophy has been, and continues to be, one in which planning must include consideration to—

(*a*) Assure continuous leadership, authority, and responsibility for executive control and direction;

(*b*) Increase organizational effectiveness during an emergency; and

(*c*) Facilitate the reestablishment of functions suspended because of emergency conditions.

*Lines of succession*

Emergency lines of succession have been established with proper delegations of authority. Predesignation to hardened site of key personnel, whose position responsibility has been determined to be vital to emergency operations, has been made, and personnel concerned have been so informed.

*Pre-position of vital records*

To facilitate reestablishment of normal operations, copies of all records considered vital have been and continue to be pre-positioned at the Agency's site.

*The National Civil Defense and Defense Mobilization Plan*

The National Civil Defense and Defense Mobilization Plan, with certain related annexes, has been received in final form. It will be necessary to make changes in the Small Business Administration's standard operating procedure in order that it will be subordinate to, and compatible with, the national plan.

*Damage assessment program*

The Small Business Administration has been cooperating on a continuous basis with the Office of Civil and Defense Mobilization in the development and operation of a damage assessment program. The method in development allows a reasonable determination of enemy capability for destruction, comparison of methods for reducing casualty and property defense, and estimating damage rapidly after an actual attack.

While the representative of the Small Business Administration is primarily concerned with small business as an important part of the mobilization base, he also supplies technical assistance to regular personnel of the Office of Civil and Defense Mobilization. The Small Business Administration field offices supply data with required specific small business firms from the facilities inventory on a regular basis. Geographical location, in accordance with the universal transverse mercator grid system, is determined by half of the Small Business Administration field offices.

*Committee representation*

The Small Business Administration is represented on committees of the Office of Civil and Defense Mobilization, including those concerned with planning and

programing for Operation Alert exercises. The Small Business Administration has a representative on a continuous basis at the Office of Civil and Defense Mobilization's relocation site both for routine operations and for briefing of Government officials as to the programs of the Small Business Administration.

*Projected plans for fiscal year 1960*

In order to maintain the standard operating procedure on a current basis, in accordance with various directives and issuances of the Office of Civil and Defense Mobilization, it will be necessary to review all issuances and make changes as required.

A complete revision of the standard operating procedure for the Small Business Administration's relocation program will be made during fiscal year 1960. It will be designed to provide officials with information as to their responsibilities and the Small Business Administration's role in planning for, and in operating during, a civil defense emergency.

It will outline the general plan for organization and operations of the Small Business Administration, as a whole, under emergency conditions, and will provide policy and guidelines for emergency planning and conduct of administrative management, radiological monitoring, evacuation, and other activities.

It will also set forth the essential functions and overall emergency plan of the Washington office and the regional offices. It will serve as the basis for projected emergency planning efforts and test exercises, and, in the event of an actual emergency, shall constitute the basic plan of action for the Agency.

It is realized that continued functioning of the Small Business Administration in time of emergency will depend, in a large part, on how well each individual and office understand and is prepared to carry out emergency assignments. To this end, the revision will be directed.

Under the provisions of the continuity of Government program, whereby departments and agencies relocate to predetermined sites, the Small Business Administration's objective for fiscal year 1960 is designed to provide safer facilities in which its officials can carry on their emergency responsibilities. With the hardened site in the "approved for modification and construction stage," efforts will be directed toward improving our relocation site.

The degree of protective construction will be geared to providing the existing facility with maximum radioactive fallout protection.

Present communications equipment consists of leased teletype connecting the Office of Civil and Defense Mobilization classified site and other agencies in the relocation arc; commercial teletype, broadcast leased line, and commercial telephone. In fiscal year 1960, it is hoped that this system will be implemented by a radio backup network, or at a minimum, a manual operating key capability. Cryptographic equipment for transmitting and receiving classified messages has already been installed at the national site. However, we expect to improve this system by installation of automatic equipment.

The Small Business Administration's training and education program has two major objectives:

(*a*) Training of officials for survival and operations in emergencies; and

(*b*) Training in radiological, chemical, and biological warfare defense.

In addition, all employees and their dependents will be instructed on survival actions and the effects of nuclear weapons. This work will be carried on through distribution of printed information and instructions published in an agency information digest.

Increased emphasis will be placed on attendance of specialized training courses offered by the Office of Civil and Defense Mobilization at Battle Creek, Mich.; Brooklyn, N.Y.; and Olney, Md.

Participation in training exercises designed to test, evaluate, and further develop the proposed emergency plans will be encouraged.

A formal program of briefing is envisioned. The objectives of these briefings will be threefold:

(*a*) To inform officials of current nonmilitary defense activities:

(*b*) To emphasize primary agency programs in accordance with established policy; and

(*c*) To stimulate individuals, office directors, and other to participate in, and support projected mobilization activities.

The objective of the Small Business Administration's radiological defense program will be to reduce the number and degree of casualties among our employees, and to remove or to limit radiological contamination as it would affect operational efficiency of personnel at our relocation sites. It is realized that this efficiency

will depend on the prompt, accurate analysis of the radiation hazard and the proper use of countermeasures; therefore, an extensive training program through the use of qualified trained instructors will be established. To support the instructional staff throughout the Agency, additional radiological equipment will be procured.

Efforts to recruit and train executive reservists, at all levels, will be continued. The training program will be further developed and will consist of—

(*a*) Orientation in the overall organization and program of the Office of Civil and Defense Mobilization;

(*b*) Familiarization of the Small Business Administration's defense mobilization program;

(*c*) Explanation and training in their respective responsibilities; and

(*d*) Participation in alert exercises.

### THE SMALL BUSINESS ADMINISTRATION LIAISON OFFICERS WITH THE DEPARTMENT OF DEFENSE AND FEDERAL CIVILIAN AGENCIES

*Department of Defense*

A Small Business Administration representative is assigned to the Department of Defense to help achieve greater coordination of the two agencies' small business programs. The Small Business Administration representative, who serves as the Administrator's spokesman at the secretarial level of Department of Defense and military services, reviews current and proposed procurement regulations, and initiates, inaugurates, and suggests new and different ideas on procurement regulations and policies which will be beneficial to small business. An example was the release of Armed Services Procurement Regulations, containing the Department of Defense's small business program, which incorporated provisions implementing the additional legislation contained in the Small Business Act and prvoided for small business set-asides on classes of items. Defense officials have given this liaison officer excellent cooperation and his participation at the Defense Department's policy level has resulted in other changes beneficial to small business.

*Civilian agencies*

A liaison coordinator is assigned to civilian departments and agencies with small business procurement authorities and property sales and disposal programs. This liaison representative participates in conferences and consults with key officials of civilian Government agencies with respect to small business participation in proposed procurements and property sales of these agencies.

*Office of Civil and Defense Mobilization*

The Small Business Administration is cooperating closely with the Office of Civil and Defense Mobilization and other Federal agencies in plans for mobilization and management of resources and production in event of a national emergency. The Administrator is a member of the Civil Defense and Defense Mobilization Board, which has a special interest in planning emergency measures to maintain the financial system and national monetary and credit structure, and to insure optimum use of small business in producing material for recovery and retaliation. The Small Business Administration is represented on interagency committees concerned with periodic testing of mobilization plans and programs of Federal, State, and local government agencies, and with development and operation of a program to inform Government units of availability of productive resources remaining after attack.

### PROCUREMENT AND TECHNICAL ASSISTANCE ACTIVITIES

In the Small Business Act, as amended, Congress strengthened the procurement set-aside procedure, and the Small Business Administration initiated appropriate steps to place the legislative changes in effect.

Congress also empowered the agency with additional authorities and responsibilities in the field of research and development, leading to establishment by the Small Business Administration of a Research and Development Division and a broadening of the agency's activity in this area.

Congress further directed the Small Business Administration and other Government agencies to work cooperatively to assure that the proportion of sales to small business of Government real and personal property will represent the "fair share" of property sold by the Government. The Agency has developed in

cooperation with the Forest Service, Department of Agriculture; and the Bureau of Land Management of the Department of the Interior, a program of small business set-asides, for the sale of Federal timber from Government-owned forest lands. The groundwork is now being laid with the General Services Administration and the Department of Defense for small business set-asides on Government surplus property.

The effectiveness of the agency's assistance to small business firms is illustrated by a study made of one of its programs, that of granting certificates of competency. During the period August 1953 through June 1959, 553 certificates of of competency were issued to small business firms covering contracts amounting to approximately $88,600,000, contracts which would not have been awarded to these small business firms without this action. Because the certificates of competency resulted in these contracts being awarded to the low bidder, the study indicated that they saved the Government an estimated $8,200,000. In addition, 219 applications for certificates of competency, amounting to approximately $57 million, were withdrawn and the award made to small business concerns because favorable Small Business Administration survey evaluations convinced contracting officials that certificates of competency were unnecessary. Indicative of the care used by the agency in evaluating firms for certificates of competency is the fact that of the 553 issued, only 16 contracts have been terminated by the Government for default due to the firms being unable to perform satisfactorily.

Exhibit A summarizes the progress and accomplishment of the Small Business Administration for fiscal years 1957, 1958, and 1959, and gives the cumulative totals since the beginning of the agency in August 1953. In brief, for fiscal year 1959:

(*a*) 22,338 procurements valued at $1,142,625,361 were jointly set aside for competitive award to small business firms;

(*b*) More than 3,800 calls and visits were made to prime contractors to develop subcontract opportunities for small business firms;

(*c*) More than 88,500 other cases of procurement assistance to small firms were handled by field offices;

(*d*) 121 certificates of competency were issued to small business firms, assuring them of receiving contracts totalling $23,234,060;

(*e*) 87 set-asides for small business totalling $3 million were made on sales of Government-owned timber during the last 2 months of the fiscal year;

(*f*) 1,314 plant visits by the Small Business Administration engineers were made to follow up on certified contracts;

(*g*) 2,505 cases of production, specifications and materials, and equipment assistance to small business grms were handled;

(*h*) 4,005 cases of assistance were rendered in connection with products expansion and diversification;

(*i*) 4,428 appraisals were made on collateral for new loans, liquidations, or sales;

(*j*) 2,515 cases of technical consultation were rendered in connection with the financial assistance program;

(*k*) 2,375 cases of assistance were given in the property sales and disposal program during the last half of the fiscal year;

(*l*) 1,573 cases of research and development assistance were handled in the last 6 months of the fiscal year.

*Procurement assistance to small business*

The significance attached to the Small Business Administration procurement assistance is reflected in the January 3, 1959, report of the Select Committee on Small Business, House of Representatives, which states: "In this committee's opinion, the overall procurement assistance program is as important to the small business concern as the financial assistance program."

The Small Business Administration has continued to strengthen its programs of providing assistance to small business concerns to participate in purchase and contracts for supplies and services for the Government.

*Joint procurement set-asides for small business concerns*

Procurement authorities, both in the Small Business Administration and in other Government agencies, recognize that this program is far from reaching its full potential. The basic problems continue to be (1) coordinating small business programs with the primary responsibility of the purchasing offices, and (2) providing adequate coverage at purchasing offices.

During fiscal year 1959, Government purchases totaling $1,142,625,361 were jointly set aside by the Small Business Administration in cooperation with Government purchasing offices for competive award to small business concerns. This is the greatest dollar value of purchases set aside for small business for any fiscal year since the beginning of the Agency. During fiscal year 1958, purchases totaling $1,062,454,031 were jointly set aside for small business. A comparison of results achieved by the joint set-aside program during fiscal years 1954 through 1959 are shown in exhibit B. As disclosed in exhibit B, there has been a pronounced increase in the amount set aside for small business firms, from $248 million in fiscal year 1954 to $387 million in fiscal year 1955, to $498 million in fiscal year 1956, to $744 million in fiscal year 1957, to $1,062 million in fiscal year 1957, and to $1,143 million in fiscal year 1959. Exhibits C and D also illustrate the progress made in this program.

The joint set-aside program is carried out by the Small Business Administration in cooperation with those Government agencies which account dollarwise for most of the Federal Government's purchases. The results of the program with each agency is shown in exhibit E.

Section 15 of the Small Business Act, as amended, empowers the Small Business Administration and Government contracting officers to set aside proposed procurements for competition among small business concerns when such action is (1) in the interest of maintaining or mobilizing the Nation's full productive capacity; (2) in the interest of war or national defense programs; or (3) in the interest of assuring that a fair proportion of the total purchases and contracts for property and services for the Government are placed with small business concerns.

To carry out the joint set-aside program, the Small Business Administration has assigned representatives to those major Government purchasing offices which can be serviced with the available manpower. There, in cooperation with procurement officials, they screen proposed purchases and jointly determine whether small firms can supply the items or services, and evaluate the small business competition. When the Small Business Administration representative ascertains that sufficient small business competition can be obtained, he initiates action for the procurement to be totally or partially set aside for competitive award to small business concerns. If this request is denied, in accordance with provisions of the Small Business Act, as amended, the action may be appealed to the Secretary or head of the agency or department involved.

When an entire procurement is reserved for small business firms—that is, set aside for exclusive award to small businesses—bids received from large business concerns are considered as non-responsive. Where only part of a proposed purchase is set aside for small business, small firms compete with all other businesses that bid on the contract, large and small, for the non-set-aside portion of the procurement in order to be considered for negotiation of the set-aside portion, the bid entered by a small business firm must be within 120 percent of the highest unit price at which the award is made for the non-set-aside portion. Negotiation is then conducted with the small business firms which are determined to be responsive and which qualify under the 120 percent rule, beginning with the firm which submitted the lowest bid on the non-set-aside portion. When only one award is made on the non-set-aside portion, the set-aside portion must be awarded at the same unit price. When the non-set-aside portion results in multiple awards, the set-aside portion is awarded at a unit price equal to that of the highest price awarded on the unrestricted portion.

The small business set-aside program is believed to be the only means of assuring that small firms will be awarded contracts. The program further serves to strengthen the national economy inasmuch as it broadens the procurement base for the Government by encouraging small business participation in Government contracts. Experience also indicates that increased small business competition frequently lowers the price for a product or service and results in a savings to the Government.

Since the start of the Small Business Administration joint procurement set-aside program in August 1953, procurements valued at $4,062,208,070 have been earmarked for competitive award to small business concerns. The net effect of this program is cumulative when considered in the light that each dollar expended on a Government contract has a multiplying effect in promoting further employment, further demands for consumer goods and services and increased well-being in the community and national economy.

Three changes made by the Congress in the Small Business Act should increase the effectiveness of the joint procurement set-aside program.

The first of these established an additional basis for small business set-asides that they can be made "in the interest of assuring that a fair proportion of the total purchases and contracts for property and services for the Government are placed with small business concerns." Formerly, small business set-asides could be made only "in the interest of maintaining or mobilizing the Nation's full productive capacity," or "in the interest of war or national defense programs."

The second legislative change authorized the setting aside for small business of classes of awards or contracts. Formerly, set-asides could be made only on individual procurement actions.

The third change provides that whenever the Small Business Administration and a purchasing agency fail to agree on a proposed set-aside, the matter shall be submitted for determination to the Secretary or head of the department or agency by the Administrator of the Small Business Administration.

The first change, broadening the basis for small business set-asides, was put into effect by the Small Business Administration and co-operating purchasing agencies immediately after the President signed the amended Small Business Act.

The first class set-aside was made by the Post Office Department and the Small Business Administration on October 7, 1958. Since then, class set-asides have been made with the other cooperating purchasing agencies.

The provision for submission of disagreements to the Secretary or head of a procuring agency also has been made effective by the military services and the Federal civilian agencies which carry on the joint set-aside program.

In its report on small business participation in Government procurement, the Select Committee on Small Business of the U.S. Senate stated: "The set-aside procedure, has undoubtedly, been a major deterrent to the trend toward greater use of large firms * * * It is inconceivable that the set-aside procedure, in light of the new provisions and in light of the success already achieved, could well be the instrument through which small concerns will regain a more equitable portion in the defense contract program."

In addition to carrying on the set-aside program, the Small Business Administration representatives, at the procurement centers, counsel owners and officers of small concerns in selling to all Government agencies. They also assist specific small business concerns to obtain an opportunity to bid on various procurements of which they otherwise would be unaware.

*Guiding small firms to areas where competition is needed*

A program which supplements that of restricting procurements for award to small business concerns is that of increasing small business competition on Government purchases that in the past have involved few or no bids from small business firms.

When the Small Business Administration representatives learn that an item or service can be supplied by small business firms, but that there has been little or no competition from them, they arrange for the Small Business Administration field offices to locate competent suppliers for the particular item or service and purchasing office. All essential data and information concerning the item or service, including drawings and specifications, are forwarded to the Agency's field offices in order that the Small Business Administration engineers and industrial specialists may match this basic information with the Agency's facilities register to find small firms competent to supply the item or service, and who wish to bid.

This action increases small business competition, broadens the industrial base, and frequently results in a better price to the Government because of greater competition. It also increases the number and variety of items and services on which joint set-asides for small business firms may be made.

*Inventory of small plant facilities*

An inventory of small business productive facilities is maintained on a decentralized basis in the field offices. Small companies interested in registration are furnished a questionnaire on which they list facilities and other pertinent information. On receipt of a questionnaire by the field office, it is filed alphabetically by company name. The most important data are reviewed and the company classified by major product or capabilities. The company is then coded for quick identification in accordance with the standard industrial classification.

The purpose of the facilities inventory is to insure that a record is provided for quickly ascertaining the productive capacity of small plants in a given area.

The data furnished by the company are carefully classified as to number of employees, types of products, and other essential production factors. This information can then be evaluated to determine a manufacturer's industrial potential, including the kinds of production for which his facilities are now suited, and the types to which the facilities can be converted in case of full mobilization for defense. Many small firms now engaged in producing a peacetime, civilian item can, when the need arises, produce a wide variety of defense items which have no civilian counterparts.

A partly mechanized operation has been accomplished by the utilization of stencil plates, which contain a minimum of identification and descriptive data on the company, and can be used for addressing correspondence to them. From such records, the field staff can readily obtain skeleton information on individual concerns by industrial groups, without going to the main alphabetical files. These condensed records are maintained in standardized industrial codes, in numerical order, for rapid reference.

The inventory is now used principally in assisting the registered companies in their efforts to obtain prime and subcontracts, in locating new sources for Government purchasing offices, in aiding the damage assessment program sponsored by the Office of Civil and Defense Mobilization, and in locating scarce or specialized machine tools and equipment when calls for them are received.

The Small Business Administration field offices cooperate with State and local governments, chambers of commerce, and trade associations in the collection of facility information to expand the facilities inventory, and so increase its coverage.

About 45,500 small plants are registered with the Small Business Administration. The increasing importance of the mobilization aspects of the inventory points up the clear need for registering more small firms that are removed from urban centers, and this is now receiving emphasis.

A program has been underway for about a year for registering qualified small business concerns with research and development capabilities. This subsidiary inventory is used as a means of informing Government procuring agencies and large prime contractors of the special capabilities of these small concerns.

*Procurement guidance and assistance*

Another important service of the Small Business Administration is help to small firms in determining which agencies purchase the products or services they want to supply the Government; in having their names placed on appropriate bidders lists; and in obtaining bid sets for purchases they are able to furnish.

As a part of its program to help small firms learn "who buys what and where," the Small Business Administration makes available to them through the Superintendent of Documents the "U.S. Government Purchasing and Specifications Directory." This is a comprehensive guide to the Government's buying procedures, the items purchased by the military and civilian agencies and the offices which purchase them, and reference sources of Government specifications and indexes to specifications. Businessmen have purchased 17,263 copies of the directory from the Government Printing Office during this past fiscal year.

The Small Business Administration also assists small firms in solving problems regarding bids and specifications. This assistance ranges from explaining to businessmen the Government's procurement regulations to having restrictive specifications amended and unduly short bid openings extended for the benefit of small firms which cannot afford large estimating staffs and therefore cannot meet the deadline for bidding.

Another important form of assistance given small businesses is help in resolving difficulties with Government procurement agencies. Some examples of this assistance are action to expedite payments due small firms; participation with small business owners in conferences with contracting officials; advice to contractors about their rights and intercession with contracting officials to protect the contractors' rights. Cases of this type may require only a few minutes to solve, or they may call for continued Small Business Administration action over a period of weeks.

*Developing subcontracting opportunities for small business*

The Small Business Administration subcontracting program performs three basic functions. First, it makes available to small business the best intelligence that can be gathered as to where they should explore the possibilities of subcontract work. Second, the agency contacts prime contractors and large subcontractors to learn of their needs for subcontracting assistance. Third, the

Small Business Administration brings the prime contractor and potential subcontractors together.

The Agency's regional offices maintain lists of major prime contractors in their respective regions and information on the type of work they are performing. Advice is given on how more detailed information on specific prime contracts may be obtained. Firms with suitable facilities are notified of new prime contracts in their general area. The agency also takes part in experimental procurements in the search for better ways to increase small business participation in subcontracting.

New prime contractors are visited to determine their needs for subcontracting assistance. Liaison is maintained with prime contractors throughout the life of their contracts. Every possible assistance is rendered the prime contractor to encourage subcontract work to the maximum extent.

During fiscal year 1959, the Small Business Administration made over 3,800 contracts with prime contractors and large subcontractors to develop subcontract opportunities for small firms.

The agency is constantly exploring means for achieving greater small business participation in subcontracts. The Agency has recommended to the Department of Defense that the Armed Services Procurement Regulation be amended to improve the participation of small business firms in subcontracts. It has further been recommended that weapons systems contracts be curtailed or administered so that capable small contractors will be afforded greater opportunities. In addition, the Small Business Administration has requested the opportunity to develop small business sources before Government approval is given for a prime contractor to acquire additional facilities at Government expense.

*Referring prime contracts to small firms*

When a small business concern asks assistance in obtaining Government orders and contracts, the Small Business Administration obtains from it data about its production facilities. The agency then notifies the firm of current bidding opportunities which are suited to its particular type of equipment. This service is provided until the firm has had time to get on bidders lists and receive notices of future purchases direct from the purchasing office. Since the agency's field offices obtain bid sets from the principal Government purchasing offices, they are able to notify small firms of many bidding opportunities of which they otherwise would be unaware.

*Certificates of competency*

The Small Business Administration is empowered to certify that a small business concern, small business production pool, or group of small firms jointly engaged in research and development, is competent as to capacity and credit to carry out the terms of a particular Government contract. Through this authority to issue certificates of competency, the agency offers what is in effect an appeal procedure for the small firm, pool, or group of small firms, whose low bid on a Government purchase, or high bid on a Government sale, is rejected for reasons of financial ability or productive capacity.

Government contracting or disposal officers are directed to accept a Certificate of Competency as conclusive without requiring the small business concern, pool, or group of firms to meet any other requirement as to financial ability and productive capacity.

This has been an important and active program since the start of the Agency. During fiscal year 1958, the agency received 239 applications for certificates and issued 115 certificates. By comparison, in fiscal year 1957, 238 applications were received, and 104 certificates were issued. In fiscal year 1959, 256 applications were received by the Small Business Administration, and 121 certificates of competency were issued.

Certificates of competency issued during fiscal year 1958 resulted in contracts amounting to $26,077,582, more than twice as much as in fiscal year 1957, when contracts were for $10,590,100. During fiscal year 1959, the certified contracts amounted to $23,234,060. Since the beginning of the agency in August 1953, 553 certificates of competency for contracts, amounting to $88,600,000, have been issued in behalf of small business firms. These contracts would have been denied to small business firms had the protection of the certificate of competency program not been available (see exhibit G).

All branches of the Department of Defense, some joint agencies, and several civilian agencies are served by this program (see exhibit F).

The very existence of the certificate of competency program often tends to tip the scales in favor of a small business concern when there is doubt as to its com-

petency. In many instances, the preliminary work accomplished by the Small Business Administration field offices has resulted in contract awards without the necessity of the issuance of certificates. To illustrate the latter point, since the beginning of the agency in August 1953, 219 applications amounting to approximately $57 million were withdrawn and the contracts awarded to small business without requiring certificates of competency due to favorable Small Business Administration survey evaluations.

The Small Business Administration takes the responsibility seriously when issuing certificates of competency. The care in making investigation and evaluating requests for certificates is demonstrated by the ratio of certificates issued to applications received. There are very few instances in which certificates were granted in which the small firm failed to complete the contract.

The Small Business Administration technical personnel keep continual check on the progress of a small firm until it has completed work on a contract which is covered by a certificate. This is in line with the agency's policy of not only making a careful original investigation, but maintaining a high standard of contract performance. During fiscal year 1959, the Small Business Administration personnel made 1,314 visits to plants to determine their progress on contracts.

Analysis of the 553 certificate of competencies issued by the Small Business Administration through June 1959 indicates that only 16 of the contracts were terminated for default due to the firm being unable to perform satisfactorily. This is an excellent record since contracting officials had determined in all 553 cases that the small business firm was not competent to perform the contract. The certificate of competencies issued repesent contracts amounting to approximately $88,600. The issuance of these certificate of competencies resulted in an estimated savings to the Government of about $8,200,000.

*Specifications assistance*

A continuing problem of small business firms is difficulty in obtaining copies of Government specifications. Many small firms receive bid sets from Government contracting offices without the appropriate specifications, or with the basic specifications alone, while important reference specifications are omitted. Frequently, when a small firm writes to the purchasing agency for the needed specifications, heavy demand for them already has exhausted the supply.

The Small Business Administration maintains at its Washington and field offices a reference set of the packaging and packing specifications most often required by small concerns in selling their products and services to the Government.

A major section of the "U.S. Government Purchasing and Specifications Directory," published by the Small Business Administration, contains a guide to over 900 places throughout the country where small business owners may refer to Government specifications and indexes; discusses the purchasing specifications used by the Government; tells how businessmen may obtain copies of them; and provides pointers on using them.

During the past fiscal year, the agency worked closely with the task force for reviewing Government procurement policies and procedures. Technical guidance was provided to a number of task force study groups. In addition, a staff member of the agency served on the study group dealing with the overall area of Government specifications, while another was chairman of an interagency special staff assignment to prepare recommendations to the Government for improving the availability of specifications. The Small Business Administration has submitted a number of problems to the study group for consideration.

In fiscal year 1959, the Small Business Administration received from the General Services Administration 170 new or interim Federal specifications. These were reviewed by the agency to make certain their provisions would not be restrictive to small concerns. The agency's analyses resulted in a number of recommendations to the General Services Administration for deletion of possible restrictive or discriminatory provisions.

The Small Business Administration also seeks the issuance of new specifications, or revisions in existing ones, to make it possible for small manufacturers to have their products considered in Government purchasing. Toward this end, the Small Business Administration negotiated with various Federal civilian and military agencies such as the General Services Administration and the Department of Agriculture, Department of Commerce, and Department of Defense.

At the request of the Department of Defense, the Small Business Administration actively participated in the fourth joint military industry packaging symposium, held in Washington September 30 to October 2, 1958.

*Business opportunity meetings*

During fiscal year 1959, the Small Business Administration, in cooperation with other Federal agencies and States and local business groups, cosponsored five small business opportunity meetings. Approximately 10,500 small business owners and managers attended these meetings and received first-hand information on the Government's buying methods, prime and subcontracting opportunities, and helpful services available from the Small Business Administration and other Federal agencies.

At these meetings, information on how to sell to the Government is presented through talks by top Government purchasing officials, by visual displays, by sample bid sets, and by exhibits of products purchased by Federal agencies. Each meeting also features exhibits by prime contractors of items for which subcontractors are being sought. In addition, the Small Business Administration specialists and Government contracting officials provide on-the-spot procurement guidance and assist individual firms in obtaining listing on appropriate bidders lists. Information regarding sales of surplus Government property and research and development also is presented.

*Review of Government procurement policies and procedures*

The Small Business Administration has provided technical assistance and has participated in the work of the task force, established by recommendation of the President's Cabinet Committee on Small Business for review of procurement policies and procedures, to increase small business participation in work on Government contracts. The Small Business Administration has referred to the task force typical problems experienced by small firms in selling to the Government, and has recommended solutions for such problems. In addition, the agency has assigned a staff member to the task force and has had other of its officials serve as chairmen or members of various task force study groups. These groups are working to eliminate inconsistencies in the procurement procedures of various departments and agencies, and in removing from them inequities which hinder small business concerns in selling to the Government.

*Prime contract authority*

The Small Business Administration is empowered to enter into contracts with any department or agency of the U.S. Government to furnish supplies and services and to arrange for the performance of such contracts through subcontracting to small business concerns or others, as may be necessary. The Small Business Administration believes that this authority to take contract in order to extend subcontracting should be continued on a standby basis for use only in extraordinary emergencies.

*Property sales assistance*

The Small Business Administration property sales assistance program consists of three principal activities: (1) personal property disposal; (2) real property disposal; and (3) disposal by sale to small business enterprises of natural resources, including timber and minerals from lands owned by the Federal Government. For each of these activities, the Small Business Administration is empowered to cooperate with the Government agency directly concerned and jointly set aside, for award to small business on a competitive basis, any contract covering all or part of a proposed property disposal or sale; and to certify with respect to the competency, as to capacity and credit, of any small business concern to perform a specific Government contract.

To implement this program, the Washington office and 7 major field offices were staffed to 10 specialists at the start of the program to provide technical assistance to small business firms, as well as assuring that a fair proportion of all sales by Government property are made to small business firms. General policies, procedures, and field instructions applicable to this program continue to be developed with various civilian and military agencies for carrying out the provisions of the Small Business Act of 1958.

Field surveys were made in the forests, Pacific Northwest, Arkansas, and eastern forests, and informal conferences held with loggers, mill operators, and trade associations to obtain their views and recommendations on the timber sales program. As a result of these meetings, general concurrence was obtained on a definition of small business for purposes of timber sales setasides. Firms bidding on Government-owned timber or related products offered for sale are classified as small if they are primarily engaged in the logging or forest prod-

ucts industry, are independently owned and operated, are not dominant in their field of operation, and, together with affiliates, employ not more than 100 persons.

Formal conferences also were held with representatives of the Department of Agriculture; and the Bureau of Land Management, Department of Interior; for the purpose of preparing operating instructions and field procedures to be used by the staff members of each of the cooperating agencies in carrying out the joint set-aside and certificate of competency programs. Implementation of procedures, regulations, and manuals governing the operations of the timber sales program was completed and coordinated at joint meetings held in Portland, Oreg. on March 26, 1959, and in Denver, Colo. on April 24, 1959. The program was officially activated on May 1, 1959, and in the 2 months through June 30, resulted in 87 set-asides for timber sales amounting to approximately $3 million.

During early fall the property sales assistance specialists will jointly set aside sales of timber in the public domain in Oregon and California lands supervised by the Bureau of Land Management. Not only are the Small Business Administration field offices working with forest supervisors and area managers to jointly set aside timber sales, but they are developing a facility inventory by working-circles and counties to ascertain the number of sawmills, plywood mills, and loggers who are operating in the Federal forests, and their approximate timber requirements on an annual basis.

In addition to the agreements covering Government timber sales, an agreement is being formulated with the General Services Administration and the Department of Defense to assist small business concerns to obtain a fair proportion of surplus real and personal property sold by these Government agencies. The General Services Administration agreement will also incorporate strategic defense material under Defense Materials Service which is sold from time to time.

Although joint agreements have not been signed between the Small Business Administration and the General Services Administration, the property sales assistance program is moving ahead. The Small Business Administration field offices are making an inventory of Government surplus property disposal locations and have requested these disposal installations to place their names on mailing lists to receive copies of invitations to bid so that they may notify small firms. Furthermore, field representatives are establishing personal contact with agency disposal officers. Thus, the groundwork is now being laid for an effective program in this area when agreements are concluded with the General Services Administration and the Department of Defense.

The field staff is currently providing guidance to small business firms interested in buying surplus Goverment real and personal property. Advice is given on where, when, and how to bid on property sales. To the extent possible, the field staff is cooperating with disposal officers in expanding interest in sales of certain items to small industrial firms. This has resulted in small firms learning of and purchasing surplus property needed by them, and in the Government obtaining a greater return because of more competitive bidding.

Plans are also being made to effect an agreement with the Department of Interior for the Small Business Administration to assist Geological Survey in developing size standards for the oil refining industry covering royalty oil which can be allocated by the Secretary of Interior to small business concerns in the refinery business.

*Research and development program*

In carrying out the policy of Congress, the Small Business Administration has established programs for research and development assistance to small business concerns. During fiscal year 1959, six specialists were assigned to field offices to implement instructions and procedures developed to carry out the basic legislative authority.

The Small Business Administration has issued "R and D Directory" listing small companies qualified for and desiring research and development work. In view of the general acceptance and utility of the publication, a revised and expanded edition is now contemplated for release in the late fall, which will list more than 2,000 research and development facilities. This listing has been widely used by Government planning and procurement agencies, public libraries, and private research facilities as a source of small business concerns interested in performing research and development in specific scientific fields.

In March 1959, the agency established a scientific working board to provide counsel on policies and operations in fulfilling the intent of Congress. Participation on the Board was provided by the National Aeronautical and Space Ad-

ministration, Advanced Research Projects Agency, Department of Defense, National Science Foundation, universities, and private research organization. Initial considerations of the Board are being devoted to the problem of getting more research and development work into the hands of small business through concentration on applied research, subcontracting, and careful selection of small firms for research and development.

The Agency expanded its efforts to establish small business set-asides on research and development contracts during this past fiscal year. Currently, representation is provided at Quartermaster Research and Engineering Command, Natick, Mass.; U.S. Army Signal Supply Agency, Fort Monmouth, N.J.; Wright Air Development Command, Dayton, Ohio; Air Force Cambridge Research Center and the various Navy Bureaus in the Washington, D.C., vicinity. As a result of this program, and with the cooperation of the Military Services Research and Development, procurements valued at more than $17 million have been set aside for small business during fiscal year 1959. Major efforts during fiscal year 1960 will be toward closer cooperation with Government agencies doing research and development work in listing qualified small business firms that are willing and able to do research and development work. This effort will be extended geographically. Programs for fostering independent research and development among small business firms are taking shape.

*Other production and products assistance activities*

The Small Business Administration procurement and technical assistance assists small firms to overcome the problems of keeping abreast of productive techniques and product development.

*Products assistance*

The importance of new and improved products and processes as a step toward diversity of operations and larger profit margins is recognized by all progressive business management. At present, many successful companies realize about half their sales on products they have brought out since World War II. Studies of the profit cycle of new products made by management concerns in the last few years indicate that the profit margin on a new product increases during the market development and growth period of the product. But as soon as the product has enjoyed sufficient success to induce significant competition, the profit margin recedes. To keep operations in a high profit zone, it is therefore desirable to bring out a succession of new products to which emphasis can be shifted from one product to the next. Then "new" products eventually become "old" ones, and they enter the period of high competition and low profitability and should be relegated to a position of minor importance or dropped.

The Small Business Administration provides new products assistance to small companies through two basic approaches.

First, the agency helps small firms find new products to make and sell. To assist small companies in this endeavor, the agency continuously collects and publicizes information in its products list circular on patents available to small firms through licensing or other normal commercial arrangements. The emphasis here is on new products. However, some which are not necessarily new but have sufficient remaining patent life to allow profitable development and appear to be of possible interest to small companies also are publicized. Included too are selected Government-owned patents available on a nonexclusive basis that might interest small companies, and a small number of American patents owned by foreign nations. In addition, some of the larger American corporations have recently begun a cooperative action with the agency by indicating the availability of patents not being used in their current programs.

The products list circular is now received each month by 16,000 individuals and business establishments. Many inquiries are received each month soliciting information about the patents listed.

Since the agency does not participate in negotiations between the owner of a patent listed in the circular and an interested inquirer, information is not available on the number of transactions successfully concluded as a result of publicity provided by the circular. However, the steady increase in the number of parties asking to receive the products list circular (it has doubled within the past year) and the steady volume of inquiries about patents listed in the circular received attest to the popularity of this service.

The second type of new products assistance consists of providing information in response to specific inquiries received from small companies engaged in or considering the manufacture of a specific product. Because of the great range

of activities in which small business concerns are engaged, the inquiries naturally are quite varied. For example, some recent inquiries pertained to the glazing of fruit; the uses and potential markets of copper powder of unusually high purity and fineness; the use of hydrocarbons for scouring wool; and products considered suitable for manufacture in a certain type of plant.

*Materials and equipment assistance*

During the past year there was a plentiful supply of basic materials and production equipment to meet the needs of small business. Nevertheless, it is plain that any substantial increase in defense requirements or a long strike in a basic industry would again result in shortages for small business. Historically, such shortages have adversely affected the competitive position of small business or even their lives, and this agency has found it necessary to take action to help the small business community under such circumstances.

Small firms have frequently compained about the high cost of production equipment. As a result, the agency has been asked to locate commercial sources of used equipment or surplus Government-owned equipment.

The Office of Civil and Defense Mobilization asks the Small Business Administration to review each request of the Department of Defense for approval to lease Government-owned machine tools for nondefense purposes. The purpose of the agency's view is to see that such leases do not adversely affect the competitive position of small business.

At the request of the Office of Civil and Defense Mobilization, the agency actively participated on the Interagency Task Group on Production Equipment which selected Government-owned machine tools to be added to the national industrial equipment reserve, and for donation to educational institutions.

This past year, the agency has participated with representatives of other agencies in discussing aluminum, machine tools, railway supplies, electronic equipment, liquid oxygen, disposal of surplus aircraft, ships, anchors, small arms, and other products and materials.

The Small Business Administration acts as spokesman for small business firms and consults with other Government agencies which are considering the adoption or revision of materials and equipment regulations.

The Small Business Administration implemented its assignment under Defense Mobilization Order 1–24 by developing, in cooperation with the Department of Commerce, a procedure for referring to that Department cases where small firms experienced hardships in seeking materials and equipment. The Department agreed (1) to recommend to the Small Business Administration alternate sources of supply for those firms which were dealing entirely with civilian work and (2) to issue priorities or directives to those small firms engaged in defense production to insure completion of their defense orders on time. The procedure enables the Small Business Administration to make recommendations in the interest of the small business community.

*Tax amortization program*

The accelerated tax amortization program was established by the Government as an incentive, in the form of tax relief, for concerns to expand defense production facilities with the diminishing request for this type of incentive activity. The importance is of minimum and on a standing basis for practical purposes. The Small Business Administration continues to perform two principal functions.

At the request of the Office of Civil and Defense Mobilization and the delegate agencies, the Small Business Administration field offices obtain additional information about small business applications for tax amortization certificates which lack essential data. In other cases, the agency is asked by small firms to check on the status of their applications and advise them of adverse developments or other circumstances. Both functions became relatively inactive as a result of the restrictions imposed by Public Law 85–165.

A procedure developed with the Department of Commerce assures full consideration of small business applications referred by the Office of Civil and Defense Mobilization to the Department of Commerce for review. Before recommending disapproval of any small business application, the Department asks the Small Business Administration for comment or additional documentation in support of the application.

*Small business production pools for defense and research and development pools*

The Small Business Administration is authorized to advise and assist in the formation of small business production pools and to formally approve proposed operations of the pools, subject to the concurrence of the Attorney General and the Chairman of the Federal Trade Commission.

The principle behind production pools is the belief that many small businesses will be assisted in obtaining contracts and orders for the production of items and services which would not otherwise be obtained and which in all probability they would not seek. Whereas experience indicates that pools are less likely to be successful during a period of reduced mobilization than in wartime, interest in production pools was sustained during the last year. It appears that firms which have experienced a decline in orders or production or production of civilian-type business have considered forming pools as a means for improving their competitive position for Government purchases of defense items.

At present there are six approved defense production pools. Early in 1959, a new production pool, Electrodyne Industries, Inc., was approved. In addition, groups in Hawaii, Oregon, California, Florida, Texas, Minnesota, New York, and Arizona have obtained information with respect to the formation of small business production pools for defense.

Following are the names and addresses of the presently approved production pools, with number of companies and employees comprising each:

| Name and address | Number of companies | Number of employees |
|---|---|---|
| Allied Construction Contractors, Joliet, Ill. | 5 | 107 |
| Allied Specialties Co., Philadelphia, Pa. | 15 | 416 |
| Caledonia County Production Pool Associates, St. Johnsbury, Vt. | 3 | 20 |
| General Tire Production Pool, Inc., Akron, Ohio | 3 | 111 |
| Huntington Production Pool, Huntington, W. Va. | 12 | 926 |
| Electrodyne Industries, Inc., Lynbrook, Long Island, N.Y. | 4 | 169 |

*Small Business Administration area assistance programs*

The Small Business Administration's area assistance programs are of three types: (1) Assistance to surplus labor areas; (2) cooperation in the rural development program; and (3) assistance to underdeveloped areas.

In each of these, the agency stresses the "build from within" concept; that is, reliance on local self-help, supplemented by Small Business Administration guidance and assistance.

When called upon to assist an era, the agency gives particular attention to a study of the area's existing small concerns and the possibility of their serving as the foundation for building from within. Among possibilities considered are whether the small firms can expand their markets, achieve more efficient operations, or take on additional lines or new products. Also investigated are the possibilities of the firms obtaining Government prime contracts or subcontracts on Government work.

Careful consideration is given to the possibility of starting additional business enterprises in the area with financial assistance which the Small Business Administration can extend to local development companies under the Small Business Investment Act.

Here are two examples of how the agency works with civic and business leaders to strengthen the economy of an area:

(1) Recently a Small Business Administration technical staff member met with civic and business leaders in 10 southeastern Kentucky communities. In each case, the agency's representative visited the existing small industrial plants to learn first hand of their products and potentialities. Then, at community meetings he explained in detail the various Small Business Administration assistance programs and the ways in which the agency could be of help in achieving industrial diversification.

(2) In cooperation with the local chamber of commerce and the State department of commerce, a Small Business Administration specialist surveyed a Massachusetts community faced with a surplus labor problem. The community had over 130 small business concerns and two or three large concerns. Among recommendations made by the agency's representative was that a manufacturer's group be organized to guide an overall development program and that a local development corporation be formed to take full advantage of the Small Business

Administration's financial assistance and other programs. Local leaders now are following through to get the area program underway.

The Small Business Administration representatives participated in the national rural development workshop at Jackson's Mill, W.Va., in May 1959, and the agency now is planning for greater participation in the rural development program in those areas designated as "low income areas."

*Production assistance*

The Small Business Administration, through its production specialists in the agency's field offices, makes a continuous effort to help small firms in production matters. Specific problems frequently arise in instances where a small company is making items for the Government indirectly related to its normal civilian business. Advice also is given on problems of plant location and plant layout. In some instances, the agency may recommend several professional consultants who specialize in management and production problems.

*Loan appraisals*

As a result of congressional interest in the administration of the Small Business Administration's financial assistance program, meetings were held within the agency in March 1957 to promote agencywide discussion and dissemination of the principles upon which a loan appraisal program could be based. During the subsequent year and a half, a number of these appraisals were made using criteria developed by qualified Small Business Administration personnel having the technical experience and background.

While questions of security and collateral are important in determining whether a loan will be made, it was recognized that they do not alone constitute the factors upon which the approval or rejection of an application is determined. The Administrator attaches great importance to such matters as management; the inherent soundness of the business enterprise; its earnings record and prospects; its long-range possibilities of successful operation; and whether the granting of a loan will increase employment or have other favorable effects upon the economic life of the community.

Based upon these considerations, a Loan Appraisal Division was established in January 1957 and staffed in the Washington office. Since this activity, as a separate function, is relatively new, qualified personnel standards had to be formulated and approved by the Civil Service Commission for the recruitment of an appraisal staff; the field offices are now being staffed.

Statistics compiled during fiscal years 1957, 1958, and 1959 show the following averages indicating the growth of the program:

| Item | Monthly average, fiscal year 1957 | Monthly average, fiscal year 1958 | Monthly average, fiscal year 1959 |
|---|---|---|---|
| Loan applications received | 572 | 658 | 846 |
| Loan applications withdrawn | 52 | 48 | 77 |
| Loan applications processed | 502 | 560 | 788 |
| Loan appraisals made | 162 | 323 | 369 |
| Percent of loan appraisals made against loan applications processed | 32 | 58 | 47 |
| Percent of loan appraisals made against loan applications received | 28 | 49 | 23 |

NOTE.—Graphic chart included as exhibit H shows the information through the 1st 9 months of fiscal year 1959.

FINANCIAL ASSISTANCE TO SMALL BUSINESS

Section 7(a) of the Small Business Act of 1958, as amended, authorizes the Small Business Administration "to make loans to enable small business concerns to fianance plant construction, conversion or expansion, including the acquisition of land; or to finance the acquisition of equipment, facilities, machinery, supplies or materials; or to supply such concerns with working capital to be used in the manufacture of articles, equipment, supplies or materials for defense, or essential civilian production, or as may be necessary to insure a well-balanced national economy; * * *"

In carrying out its functions, the Small Business Administration financial specialists have given advice and counsel to thousands of small business con-

cerns on their financial management problems, actively representing them in many cases in their negotiations with private financial institutions; and when needed financing was not otherwise available, the agency has provided these businesses funds for expansion and operations.

In this manner, the Small Business Administration is contributing to the independence and economic health of American small business, adding its part to the program of industrial mobilization to preserve our national security. Many of the loans made by the Small Business Administration are to finance the performance of war and defense contracts and thereby effectuate the purposes of the Defense Production Act of 1950, as amended.

For the fiscal year ended June 30, 1959, the Small Business Administration received 10,213 applications for regular business loans for a total approximating $590,851,000, of which 960 applications for a total of $58,161,000 was subsequently withdrawn. A total of 5,582 loans aggregating $267,042,000 was approved; 4,138 applications totaling $263,055,000 having been declined with the balance pending final action.

These figures represent a 13 to 14 percent increase in the dollar value and number of applications received and approved over the similar figures for fiscal year 1958.

A noteworthy feature of the Small Business Administration's lending program is that banks have participated with the Small Business Administration in nearly two-thirds of the loans approved. Approximately one-fourth of the participation loans were on a deferred basis and the remainder on an immediate basis.

*Total loans approved*

[Dollars in thousands]

| Business loans | Fiscal year 1959 July 1958–June 30, 1959 | | | Cumulative through June 30, 1959 | | |
|---|---|---|---|---|---|---|
| | Number | Amount approved | | Number | Amount approved | |
| | | Total | SBA share | | Total | SBA share |
| Direct | 2,256 | $86,438 | $86,438 | 5,920 | $245,191 | $245,191 |
| Immediate participation | 2,387 | 132,809 | 106,139 | 7,055 | 372,948 | 293,886 |
| Deferred participation | 939 | 47,795 | 35,962 | 3,717 | 168,685 | 125,420 |
| Total participation | 3,326 | 180,604 | 142,101 | 10,772 | 541,633 | 419,306 |
| Total business | 5,582 | 267,042 | 228,539 | 16,692 | 786,825 | 664,497 |

Of the 16,692 business loans approved from inception through June 30, 1959, 5,519 aggregating $366,683,000 were for manufacturing firms. The remaining 11,173 loans, totaling $420,142,000, were for various nonmanufacturing business activities.

During fiscal year 1959, there was again substantial activity in loans approved to disaster victims under section 7(b) of the Small Business Act of 1958, as amended. During the period, 1,122 disaster applications were received totaling approximately $15,034,000; 72 totaling $1,424,000 subsequently were withdrawn; 908 were approved for $9,202,000, and 233 were declined for $5,715,000, with the balance pending action.

## EXHIBIT A

### *Procurement and technical assistance accomplishments*

| | Fiscal year 1957 | Fiscal year 1958 | Fiscal year 1959 | Aug. 1, 1953–June 30, 1959 |
|---|---|---|---|---|
| Procurements set aside for small business | 11,851 | 17,819 | 22,338 | 63,628 |
| Value | $744,335,300 | $1,062,454,031 | [1] $1,142,625,361 | [1] $4,062,208,070 |
| Contacts to develop subcontracting opportunities | 4,741 | 3,021 | 3,827 | 20,139 |
| Procurement assistance | | | 88,556 | [2] 88,556 |
| Prime contract referrals | 53,857 | 32,185 | [3] | |
| Subcontract opportunities referred | 6,384 | 6,474 | [3] | |
| Procurement assistance counseling and representation to procurement agencies on behalf of small firms | 30,389 | 24,848 | [3] | |
| Firms helped to bid on specific procurements | 10,029 | 7,701 | [3] | |
| Contacts to develop additional sources of supply | 8,885 | 11,446 | [3] | |
| Inquiries and applications received regarding problems and questions on small business size standards | [4] | [4] | 6,812 | [2] 6,812 |
| Firms contacted in order to expand and keep current the inventory of productive facilities of small business concerns [5] | [4] | [4] | 6,249 | [2] 6,249 |
| Certificates of competency: | | | | |
| Plant surveys (made prior to issuance or denial of COC) | [3] | [3] | [6] 666 | [6] 666 |
| Awards made without formal COC action due to SBA participation and assistance | [4] | [4] | [6] 48 | [6] 48 |
| Applications received | 238 | 239 | 256 | 1,172 |
| Value | $39,908,400 | $62,562,724 | $52,303,394 | $237,905,661 |
| Number of certificates of competency issued | 104 | 115 | 121 | 553 |
| Value | $10,590,100 | $26,077,582 | $23,234,060 | $87,315,225 |
| Visits made to plants in connection with followup and progress reports certified contracts | 792 | 699 | 1,314 | 5,503 |
| Cases in which guidance was given on production, engineering, and manufacturing problems, including materials and equipment, pooling, specifications, plant layout, etc | 4,413 | 3,596 | 2,505 | 34,589 |
| Production and industrial surveys, including SBA area assistance | [3] | [3] | [6] 223 | [6] 223 |
| Cases reviewed for listing new products and processes in the products list circular | [7] | 1,549 | 1,725 | [7] |
| Inventions listed in the products list circular | 1,220 | 1,341 | [8] | [6] 3,424 |
| Cases of assistance rendered in connection with products expansion and diversification and specific products listed in the products list circular | [7] | 4,996 | 4,005 | [7] |
| Appraisals made on collateral for new loans, liquidations, or sales | 1,944 | 3,876 | 4,428 | [6] 10,248 |
| Engineering surveys made in connection with SBA loans, including delinquent loans, progress reports for disbursement of loans, etc | [3] | [3] | [6] 282 | [6] 282 |
| Cases of technical consultation rendered in connection with the financial assistance program | [4] | [4] | 2,515 | [2] 2,515 |
| Cases of assistance rendered in the property sales and disposal program, including surveys of surplus property, mineral leases, and timberland | [4] | [4] | [6] 2,375 | [6] 2,375 |
| Timber sales set aside for small business | | | [10] 87 | [10] 87 |
| Value | | | [10] $3,000,000 | [11] $3,000,000 |
| Cases of research and development assistance | [4] | [4] | [6] 1,573 | [6] 1,573 |
| Engineering surveys [12] | 3,340 | 4,879 | [9] | [13] 11,752 |

[1] Includes more than $17 million in set-asides on research and development contracts during fiscal 1959.
[2] Data covers period beginning July 1, 1958.
[3] Effective Jan. 1 1959, these statistics were consolidated under "Procurement Assistance."
[4] No record. [5] Included in engineering surveys for fiscal year 1957 and 1958.
[6] Covers period beginning Jan. 1, 1959. [7] Statistics not maintained on comparable basis.
[8] Covers period Mar. 1, 1955, through June 30, 1958. [9] Covers period beginning July 1, 1956.
[10] This program was inaugurated May 1, 1959; these set-asides were made the last 2 months of fiscal 1959 and cover timber scheduled to be cut the first 6 months of fiscal 1960 (value is approximate).
[11] Total number of companies listed in the facilities inventory as of June 30, 1959—45,448.
[12] Effective Jan. 1, 1959, these statistics were reported under COC plant surveys, production and industrial surveys, and engineering surveys in connection with loans.
[13] Covers period through June 1958.

## EXHIBIT B

*Joint set-asides—Comparison of fiscal years 1954–59*

[Dollar value in thousands]

| | Fiscal year 1954 [1] | Fiscal year 1955 | Fiscal year 1956 | Fiscal year 1957 | Fiscal year 1958 | Fiscal year 1959 |
|---|---|---|---|---|---|---|
| Initiative by SBA: | | | | | | |
| Number | 2,012 | 4,030 | 6,407 | 12,082 | 19,273 | 24,753 |
| Amount | $372,634 | $449,721 | $566,082 | $830,653 | $1,390 | $1,778,441 |
| Agreed to: | | | | | | |
| Number | 1,667 | 3,924 | 6,075 | 11,851 | 17,819 | 22,338 |
| Amount | $247,601 | $386,611 | $497,678 | $744,335 | $1,062 | $1,142,625 |
| Awarded: | | | | | | |
| Number | 986 | 2,663 | 4,750 | 9,389 | 13,719 | 19,810 |
| Amount | $170,911 | $193,777 | $344,810 | $552,573 | $676,749 | $848,570 |

[1] Includes 1 month of operation under the Small Defense Plants Administration.

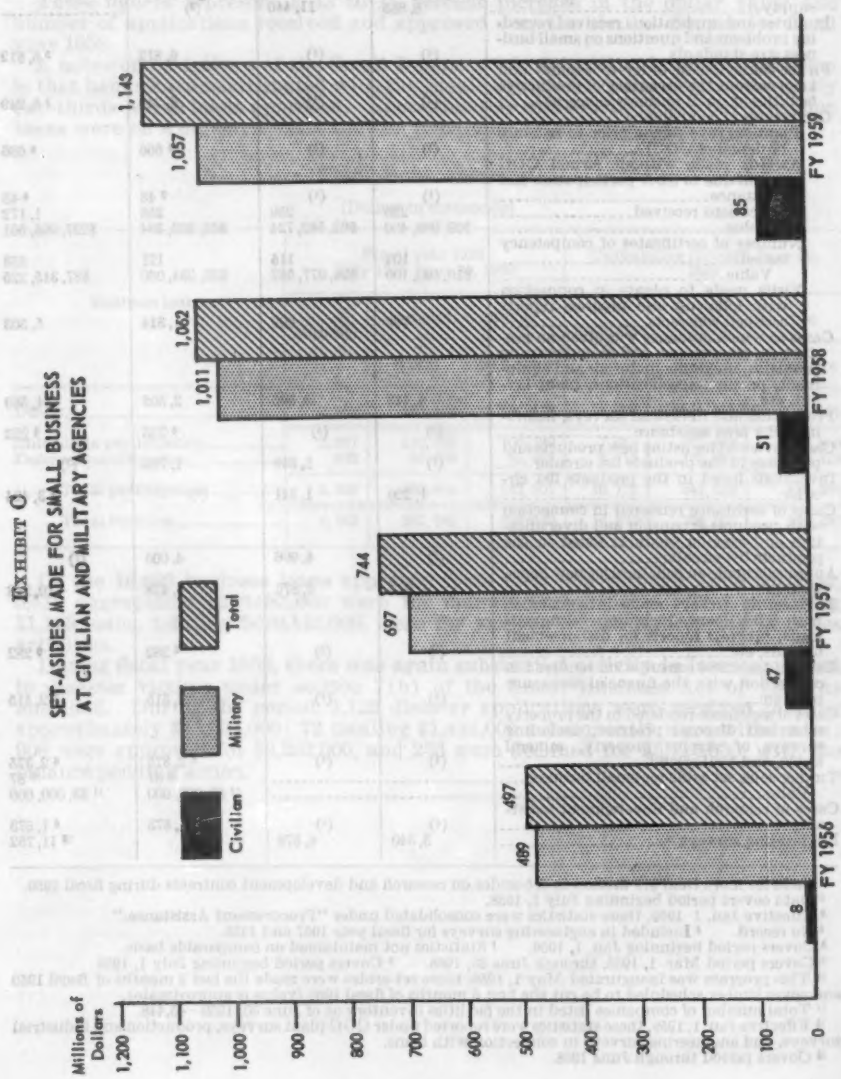


EXHIBIT D

NUMBER OF CONTRACTS AWARDED TO SMALL BUSINESS FIRMS UNDER JOINT SET-ASIDE PROGRAM

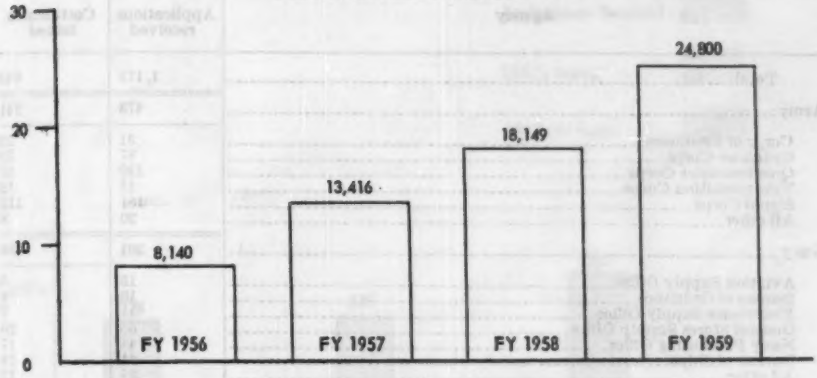



EXHIBIT E

*Joint set-aside program—By agency, fiscal year 1959*

[Dollar value in thousands]

| | Set-asides initiated by Small Business Administration | Agreed to by purchasing agency | Procurements awarded by purchasing agency [1] |
|---|---|---|---|
| Total: | | | |
| Number | 24,753 | 22,338 | 19,810 |
| Amount | $1,778,441 | $1,142,625 | $848,570 |
| Army: | | | |
| Number | 9,961 | 8,497 | 7,300 |
| Amount | $824,840 | $382,567 | $326,994 |
| Navy: | | | |
| Number | 7,578 | 6,987 | 6,349 |
| Amount | $477,220 | $421,687 | $303,189 |
| Air Force: | | | |
| Number | 4,292 | 4,115 | 3,627 |
| Amount | $333,544 | $253,031 | $167,196 |
| General Services Administration: | | | |
| Number | 1,177 | 1,049 | 915 |
| Amount | $79,661 | $48,018 | $18,647 |
| Veterans' Administration: | | | |
| Number | 191 | 186 | 164 |
| Amount | $4,665 | $4,505 | $4,736 |
| Department of Agriculture: | | | |
| Number | 255 | 253 | 231 |
| Amount | $3,020 | $2,570 | $2,178 |
| Department of Commerce: [2] | | | |
| Number | 946 | 904 | 933 |
| Amount | $42,643 | $24,254 | $21,926 |
| Department of the Interior: | | | |
| Number | 234 | 234 | 203 |
| Amount | $3,444 | $3,444 | $1,837 |
| Post Office Department: | | | |
| Number | 102 | 96 | 71 |
| Amount | $9,201 | $2,346 | $1,617 |
| Other agencies: | | | |
| Number | 17 | 17 | 17 |
| Amount | $203 | $203 | $250 |

[1] These awards have resulted in 24,800 contracts to small firms.
[2] Includes Department of Commerce and Federal Aviation Agency cases.

## EXHIBIT F

*Certificates of competency, Aug. 1, 1953, through June 30, 1959*

| Agency | Applications received | Certificates issued |
|---|---|---|
| Total | 1,172 | 553 |
| Army | 473 | 231 |
| Corps of Engineers | 31 | 12 |
| Ordnance Corps | 87 | 36 |
| Quartermaster Corps | 139 | 51 |
| Transportation Corps | 15 | 12 |
| Signal Corps | 181 | 112 |
| All other | 20 | 8 |
| Navy | 201 | 84 |
| Aviation Supply Office | 12 | 6 |
| Bureau of Ordnance | 10 | 2 |
| Electronics Supply Office | 11 | 7 |
| General Stores Supply Office | 55 | 26 |
| Navy Purchasing Office | 44 | 17 |
| Bureau of Ships | 44 | 14 |
| All other | 25 | 12 |
| Air Force | 392 | 182 |
| Joint agencies | 63 | 30 |
| Military Medical Supply Agency | 15 | 9 |
| Military Clothing and Textile Supply Agency | 45 | 20 |
| All other | 3 | 1 |
| General Services Administration | 33 | 20 |
| Treasury: Bureau of Engraving and Printing | 4 | 4 |
| Interior Department | 1 | ---- |
| Post Office Department | 4 | 2 |
| Veterans' Administration | 1 | ---- |

EXHIBIT G

CERTIFICATE OF COMPETENCY PROGRAM, COMPARISON OF ACTIVITY, FISCAL YEAR 1957–59

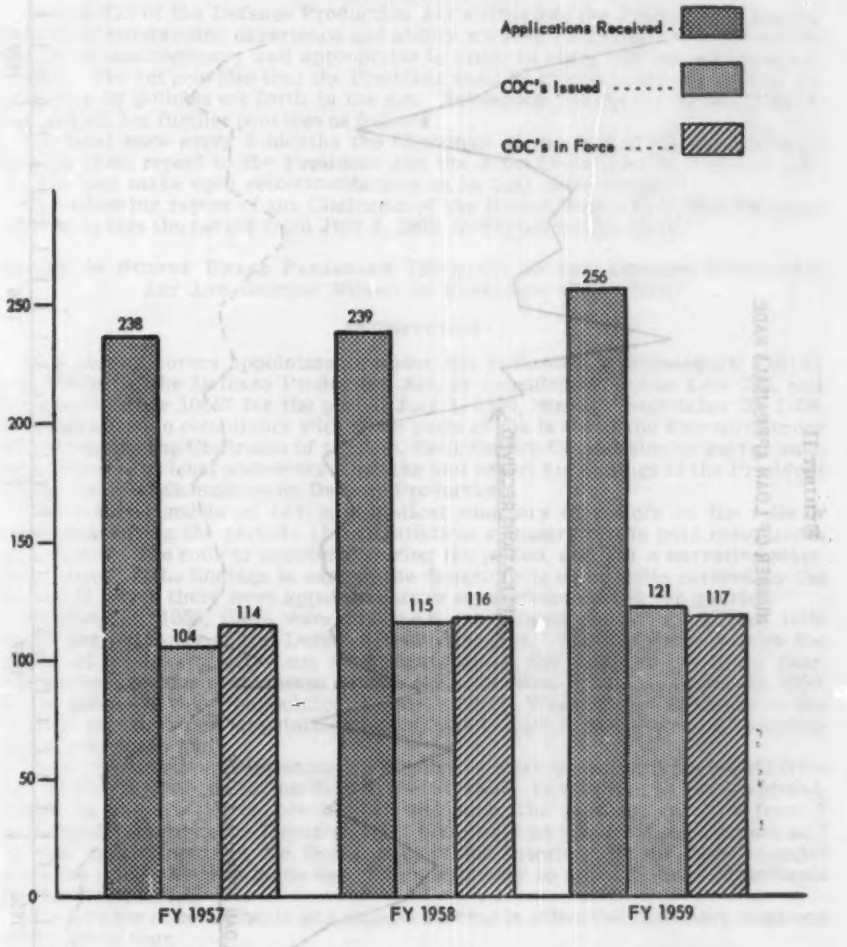
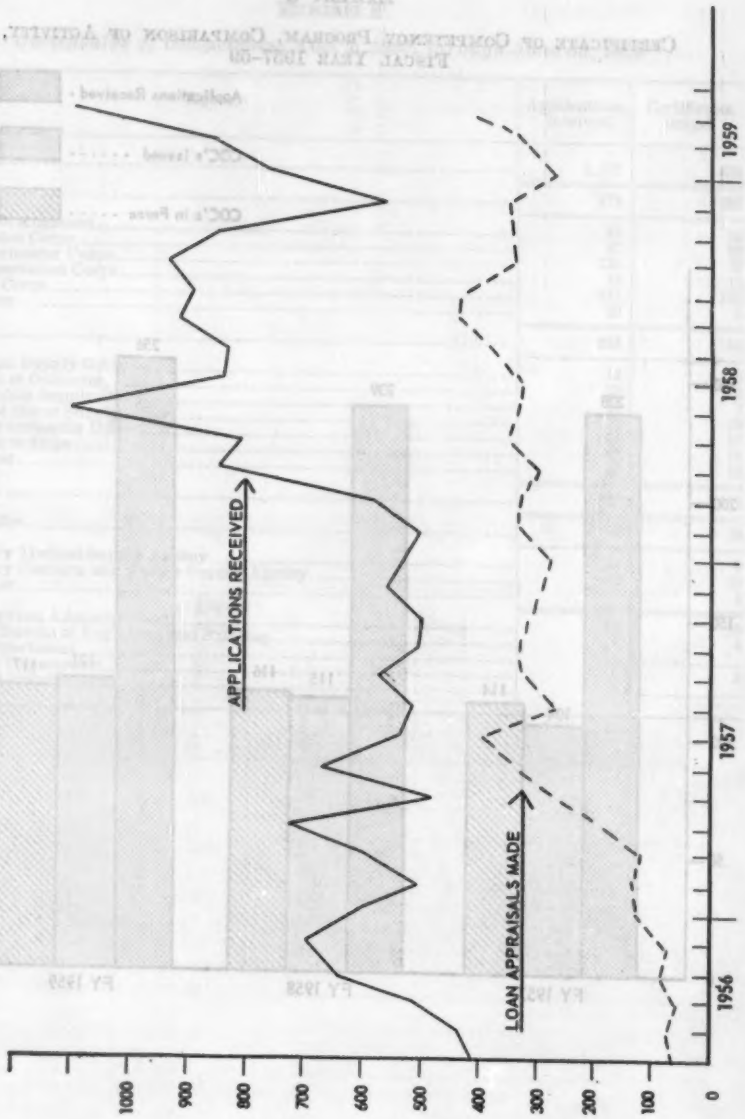


EXHIBIT H

NUMBER OF LOAN APPRAISALS MADE



## CIVIL SERVICE COMMISSION

### Report of U.S. Civil Service Commission on W.O.C. Employees

Section 710 of the Defense Production Act authorizes the President to employ persons of outstanding experience and ability without compensation to the extent that he deems necessary and appropriate in order to carry out the provisions of the act. The act provides that the President shall be guided in the exercise of the authority by policies set forth in the act. Subsection 710(b)(7) of the Defense Production Act further provides as follows:

"At least once every 3 months the Chairman of the U.S. Civil Service Commission shall report to the President and the Joint Committee on Defense Production and make such recommendations as he may deem proper."

The following report of the Chairman of the United States Civil Service Commission covers the period from July 1, 1959, to September 30, 1959.

### Report of Survey Under Paragraph 710(b)(7) of the Defense Production Act and Section 305(a) of Executive Order 10647

#### INTRODUCTION

This survey covers appointments under the authority of Subsections 710(b) and 710(c) of the Defense Production Act, as amended by Public Law 295, and Executive Order 10647 for the period July 1, 1959, through September 30, 1959. It is submitted in compliance with those parts of the law and the Executive order which require the Chairman of the U.S. Civil Service Commission to survey such appointments at least once every 3 months and report his findings to the President and to the Joint Committee on Defense Production.

The report consists of (*a*), a statistical summary of w.o.c.'s on the rolls or appointed during the period; (*b*) a statistical summary of the paid consultants or experts on the rolls or appointed during the period, and (*c*) a narrative statement covering the findings in each of the departments or agencies covered by the survey in which there were appointments or separations during the quarter.

On June 30, 1959, there were 147 w.o.c. consultants carried on agency rolls under the authority of the Defense Production Act. The Air Force follows the policy of separating all w.o.c. consultants as of the close of the fiscal year. Therefore, five consultants were terminated as of close-of-business, June 30, 1959. These same five were reappointed on July 1, 1959. While these are shown on the current report as new appointments, they are in fact a continuation of appointments previously made.

Counting these reappointments, the number of w.o.c. consultants increased from 142 on July 1, 1959, to 165 on September 30, 1959. In addition to the 5 appointments in the Air Force previously mentioned, the increase resulted from 7 new appointments in the Department of Commerce as against 3 separations, and 14 new appointments in the Department of the Interior. These three agencies were the only ones who made use of this authority to appoint w.o.c. consultants during this quarter.

The number of consultants and experts serving in other than advisory positions remained at four.

Only two minor irregularities were disclosed by this survey. The Department of Commerce had failed in two instances to file statements of financial change required by section 302(c) within the prescribed time limits. Such a statement has now been filed in one instance and we have been assured that it will be filed promptly in the remaining case.

Three w.a.e. consultants were appointed during the quarter, all in the Office of Civil and Defense Mobilization. There were no separations, resulting in a net increase of three in the number on the rolls on July 1, 1959. Our report for the period ending June 30, 1959, was in error in that the separation of one w.a.e. consultant employed by the General Services Administration was not reported.

In those agencies making no appointments or reporting no separations, the records were reviewed to determine that the requirement for filing revised financial statements had been met. All such statements were filed with the Federal Register Division within prescribed time limits. Since there was no other activity in this area, these agencies are not included in the narrative coverage which follows:

## STATISTICAL SUMMARY

### *Appointees without compensation*

| Agency | W.o.c.'s on rolls, July 1, 1959 | W.o.c.'s appointed July 1 to Sept. 30, 1959 | W.o.c.'s separated July 1 to Sept. 30, 1959 | W.o.c.'s on rolls, Sept. 30, 1959 | Number in advisory position | Number in other than advisory positions |
|---|---|---|---|---|---|---|
| Commerce | 82 | 7 | 3 | 86 | 83 | 3 |
| OCDM | 30 | 0 | 0 | 30 | 29 | 1 |
| Interior | 19 | 14 | 0 | 33 | 33 | 0 |
| Defense: | | | | | | |
| Office of Secretary | 0 | 0 | 0 | 0 | 0 | 0 |
| Army | 8 | 0 | 0 | 8 | 8 | 0 |
| Air Force | 0 | [1] 5 | 0 | 5 | 5 | 0 |
| Navy | 0 | 0 | 0 | 0 | 0 | 0 |
| GSA | 0 | 0 | 0 | 0 | 0 | 0 |
| ICC | 3 | 0 | 0 | 3 | 3 | 0 |
| Labor | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 142 | 26 | 3 | 165 | 161 | 4 |

[1] Reappointed on July 1, 1959.

### *Consultants and experts w.a.e, not to exceed $50 per day*

| Agency | W.a.e.'s on rolls July 1, 1959 | W.a.e.'s appointed July 1 to Sept. 30, 1959 | W.a.e.'s separated July 1 to Sept. 30, 1959 | Total w.a.e.'s on rolls as of Sept. 30, 1959 |
|---|---|---|---|---|
| Commerce | 9 | 0 | 0 | 9 |
| OCDM | 63 | 3 | 0 | 66 |
| Interior | 3 | 0 | 0 | 3 |
| Defense Department: | | | | |
| Office of Secretary | 0 | 0 | 0 | 0 |
| Army | 10 | 0 | 0 | 10 |
| Navy | 0 | 0 | 0 | 0 |
| General Services Administration | [1] 4 | 0 | 0 | 4 |
| Interstate Commerce Commission | 3 | 0 | 0 | 3 |
| Labor | 0 | 0 | 0 | 0 |
| Total | 92 | 3 | 0 | 95 |

[1] Discrepancy due to termination of 1 employee on June 16, 1959, not reported during last quarter.

## SUMMARY BY AGENCIES

### *Commerce*

**The Department of Commerce appointed seven consultants under the authority of section 710(b) of the Defense Production Act during the quarter ending September 30, 1959. The Department reported three separations. There were 86 w.o.c. consultants and experts on the rolls at the end of the period, 83 of whom were found to be serving in advisory positions with 3 serving in positions having operating responsibility.**

A review of the files in the cases of the seven new appointees resulted in a finding that all provisions of the Executive order had been complied with.

In the cases of those consultants who had continued on the rolls, a check of the records indicated two minor irregularities. In one instance, the statement of financial change in the case of Mr. Paul Butler had been filed with the Federal Register 3 days late due to an administrative oversight. In the second case, that of John Clemson, the statement of financial change had not yet been published at the time of our survey. At that time, it was 5 days late. Agency officials indicated that this oversight was the result of a state of uncertainty which prevailed for several months due to a reduction in appropriations in the office where Mr. Clemson is employed. We were assured that this statement would be secured and filed promptly. This case will be reviewed on the next quarterly inspection.

On July 1, 1959, the Department of Commerce had nine appointees on its rolls under the authority of section 710(c) of the Defense Production Act. There were no appointments or separations during the quarter.

*Office of Civil and Defense Mobilization*

This Office made no appointments or separations during the quarter of w.o.c. consultants carried under the authority of section 710(b) of the Defense Production Act.

A check of Federal Register records indicated that all required statements of changes in financial interests had been filed and published within prescribed time limits.

This Office had 63 w.a.e. appointees under section 710(c) of the Defense Production Act on its rolls at the beginning of the quarter. There were 3 additional appointments during the quarter leaving a total of 66 on the rolls at the end of the reporting period. The three new appointees were found to be occupying consultant positions and were fully qualified.

*Interior*

The 19 w.o.c. consultants on the rolls of this agency at the beginning of the quarter continued without change. In addition, the agency made 14 new appointments.

The personnel files in the cases of these new appointees were found to indicate that all are fully qualified. The required certifications on the part of the head of the agency were complete and the necessary statements of financial interests had been filed and published by the Federal Register within required time limits.

The three w.a.e. consultants carried on the rolls at the end of the previous quarter continued to serve during the quarter covered by this survey. There were no new appointments and no terminations.

*Air Force*

On June 30, 1959, the close of the fiscal year, the Department of the Air Force carried five consultants under the authority of section 710(b) of the Defense Production Act. These five were separated as of the close of business on June 30. On July 1, 1959, these same five consultants were reappointed for the fiscal year 1960 to serve not to exceed 90 days.

The required certifications on the part of the head of the agency were in the files. The appointments were properly reported to the Federal Register for publication within prescribed time limits.

***List of Executive orders issued under the authority of the Defense Production Act of 1959, as amended, in whole or in part, to Nov. 1, 1959 (Reorganization Plan No. 1 of 1958 included)***

| Executive Order No, | Title of order | Date of order | Federal Register citation | Date of Federal Register |
|---|---|---|---|---|
| 10160 | Providing for the preservation of records for certain purposes of the Defense Production Act of 1950. | Sept. 9, 1950 | 15 F.R. 6103 | Sept. 12, 1950 |
| 10161 | Delegating certain functions of the President under the Defense Production Act of 1950. | do | 15 F.R. 6105 | Do. |
| 10182 | Providing for the appointment of certain persons under the Defense Production Act of 1950, and prescribing regulations for their exemption from certain conflict-of-interest statutes. | Nov. 21, 1950 | 15 F.R. 8013 | Nov. 23, 1950 |
| 10193 | Providing for the conduct of the mobilization effort of the Government. | Dec. 16, 1950 | 15 F.R. 9031 | Dec. 19, 1950 |
| 10200 | Establishing the Defense Production Administration. | Jan. 3, 1951 | 16 F.R. 61 | Jan. 4, 1951 |
| 10205 | Amending Executive Order No. 10182 relating to the appointment of certain persons under the Defense Production Act of 1950. | Jan. 16, 1951 | 16 F.R. 419 | Jan. 17, 1951 |
| 10219 | Defining certain responsibilities of Federal agencies with respect to transportation and storage. | Feb. 28, 1951 | 16 F.R. 1983 | Mar. 2, 1951 |
| 10223 | Further providing for the performance of certain functions under the Defense Production Act of 1950. | Mar. 10, 1951 | 16 F.R. 2247 | Mar. 13, 1951 |
| 10224 | Establishing the National Advisory Board on Mobilization Policy. | Mar. 15, 1951 | 16 F.R. 2543 | Mar. 20, 1951 |
| 10233 | Amending Executive Order No. 10161 with respect to wage stabilization and settlement of labor disputes. | Apr. 21, 1951 | 16 F.R. 3503 | Apr. 24, 1951 |
| 10281 | Defense materials procurement and supply | Aug. 28, 1951 | 16 F.R. 8789 | Aug. 30, 1951 |
| 10301 | Amending Executive Order No. 10161, as amended, to provide for alternate members of the Wage Stabilization Board. | Nov. 2, 1951 | 16 F.R. 11257 | Nov. 6, 1951 |
| 10308 | Improving the means for obtaining compliance with the nondiscrimination provisions of Federal contracts. | Dec. 3, 1951 | 16 F.R. 12303 | Dec. 6, 1951 |
| 10323 | Transferring certain functions and delegating certain powers to the Small Defense Plants Administration. | Feb. 5, 1952 | 17 F.R. 1145 | Feb. 6, 1952 |
| 10324 | Amending Executive Order No. 10161 of Sept. 9, 1950, with respect to the definitions of "solid fuels" and "domestic transportation, storage, and port facilities." | Feb. 6, 1952 | 17 F.R. 1171 | Feb. 7, 1952 |
| 10359 | Amending Executive Order No. 10161, as amended, with respect to certain plant fibers. | June 9, 1952 | 17 F.R. 5269 | June 11, 1952 |
| 10370 | Delegating certain authority of the President to the Small Defense Plants Administrator. | July 7, 1952 | 17 F.R. 6141 | July 9, 1952 |
| 10373 | Amending Executive Order No. 10161 with respect to real-estate credit. | July 14, 1952 | 17 F.R. 6425 | July 16, 1952 |
| 10377 | Providing for the composition of the Wage Stabilization Board. | July 25, 1952 | 17 F.R. 6891 | July 29, 1952 |
| 10390 | Amending Executive Order No. 10161 of Sept. 9, 1950, as amended, to provide for certain alternate members of the Wage Stabilization Board. | Aug. 30, 1952 | 17 F.R. 7995 | Sept. 4, 1952 |
| 10433 | Further providing for the administration of the Defense Production Act of 1950, as amended. | Feb. 4, 1953 | 18 F.R. 761 | Feb. 6, 1953 |
| 10434 | Suspension of wage and salary controls under the Defense Production Act of 1950, as amended. | Feb. 6, 1953 | 18 F.R. 809 | Feb. 10, 1953 |
| 10461 | Delegating and transferring certain functions and affairs to the Office of Defense Mobilization provided for in Reorganization Plan No. 3 of 1953. | June 17, 1953 | 18 F.R. 8513 | June 19, 1953 |
| 10467 | Further providing for the administration of the Defense Production Act of 1950, as amended. | June 30, 1953 | 18 F.R. 3777 | July 2, 1953 |
| 10480 | Further providing for the administration of the defense mobilization program. | Aug. 14, 1953 | 18 F.R. 4939 | Aug. 20, 1953 |
| 10489 | Providing for the administration of certain loan and guaranty functions under the Defense Production Act of 1950, as amended. | Sept. 26, 1953 | 18 F.R. 6201 | Sept. 29, 1953 |

*List of Executive orders issued under the authority of the Defense Production Act of 1959, as amended, in whole or in part, to Nov. 1, 1959 (Reorganization Plan No. 1 of 1958 included)*—Continued

| Executive Order No. | Title of order | Date of order | Federal Register citation | Date of Federal Register |
|---|---|---|---|---|
| 10493 | Delegating certain functions of the President to the Administrator of the Small Business Administration. | Oct. 14, 1953 | 18 F.R. 6583 | Oct. 16, 1953 |
| 10494 | Disposition of functions remaining under title IV of the Defense Production Act. | do | 18 F.R. 6585 | Do. |
| 10504 | Transferring certain functions, powers, and duties to the Small Business Administration. | Dec. 1, 1953 | 18 F.R. 7767 | Dec. 3, 1953 |
| 10537 | Amending Executive Orders Nos. 10219 and 10480 with respect to the designation of a Commissioner of the Interstate Commerce Commission to perform certain functions. | June 22, 1954 | 19 F.R. 3807 | June 22, 1954 |
| 10574 | Amendment of Executive Order No. 10480 providing for the administration of the defense mobilization program. | Nov. 5, 1954 | 19 F.R. 7249 | Nov. 9, 1954 |
| 10634 | Providing for loans to aid in the reconstruction, rehabilitation, and replacement of facilities which are destroyed or damaged by a major disaster and which are required for national defense. | Aug. 25, 1955 | 20 F.R. 6433 | Sept. 1, 1955 |
| 10647 | Providing for the appointment of certain persons under the Defense Production Act of 1950, as amended. | Nov. 28, 1955 | 20 F.R. 8769 | Nov. 30, 1955 |
| 10660 | Providing for the establishment of a National Defense Executive Reserve. | Feb. 15, 1956 | 21 F.R. 1117 | Feb. 18, 1956 |
| 10662 | Amendment of Executive Order No. 10480 and revocation of Executive Order No. 10160, relating to the administration of the Defense Production Act of 1950. | Mar. 13, 1956 | 21 F.R. 1673 | Mar. 16, 1956 |
| Reorganization Plan No. 1 of 1958. | Establishment in Executive Office of the President the Office of Defense and Civilian Mobilization, Transfer of Civil Defense Advisory Council to Office of Defense and Civilian Mobilization, representatives on National Security Council (submitted pursuant to the Reorganization Act of 1949, approved June 20, 1949, as amended, 63 Stat. 206, 5 U.S.C. 133z-9). | June 30, 1958 | 23 F.R. 4991 | July 1, 1958 |
| 10773 | Transfer of functions from Office of Defense Mobilization and Federal Civil Defense Administration, assignments and delegations to Director of Office of Defense and Civilian Mobilization, establishment of Defense and Civilian Mobilization Board. | July 1, 1958 | 23 F.R. 5061 | July 3, 1958 |
| 10782 | Change of name from Office of Defense and Civilian Mobilization to Office of Civil and Defense Mobilization consonant with the act of Aug. 26, 1958 (72 Stat. 861). | Sept. 6, 1958 | 23 F.R. 6971 | Sept. 10, 1958 |
| 10819 | Amendment of Executive Order No. 10480, as amended, relating to the defense mobilization program. | May 8, 1959 | 24 F.R. 3779 | May 12, 1959 |

## THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED [1]

**AN ACT To establish a system of priorities and allocations for materials and facilities, authorize the requisitioning thereof, provide financial assistance for expansion of productive capacity and supply, provide for price and wage stabilization, provide for the settlement of labor disputes, strengthen controls over credit, and by these measures facilitate the production of goods and services necessary for the national security, and for other purposes**

***Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*** **That this Act, divided into titles, may be cited as "the Defense Production Act of 1950."**

[1] Public Law 774, 81st Cong., September 8, 1950, ch. 932, 64 Stat. 798, 50 U.S.C. App. 2061–2166; Public Law 69, 82d Cong., June 30, 1951, ch. 198; Public Law 96, 82d Cong., July 31, 1951, ch. 275, 65 Stat. 134, 50 U.S.C. App. 2061–2166; Public Law 429, 82d Cong., June 30, 1952, ch. 530, 66 Stat. 296, 50 U.S.C. App. 2061–2166; Public Law 95, 83d Cong., June 30, 1953, ch. 171; Public Law 119, 84th Cong., June 30, 1955, ch. 251; Public Law 295, 84th Cong., August 9, 1955, ch. 655, 69 Stat. 580, 50 U.S.C. App. 2061–2166 (effective as of the close of July 31, 1955); Public Law 632, 84th Cong., June 29, 1956, ch. 474, 70 Stat. 408, 50 U.S.C. App. 2061–2166 (1956 amendment to sec. 712(e) effective July 1, 1956); Public Law 85–471, 85th Cong., June 28, 1958, 72 Stat. 241, 50 U.S.C. App. 2061–2166(a).

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Title I. Priorities and allocations.
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DECLARATION OF POLICY

SEC. 2. In view of the present international situation and in order to provide for the national defense and national security, our mobilization effort continues to require some diversion of certain materials and facilities from civilian use to military and related purposes. It also requires the development of preparedness programs and the expansion of productive capacity and supply beyond the levels needed to meet the civilian demand, in order to reduce the time required for full mobilization in the event of an attack on the United States.

In order to insure productive capacity in the event of such an attack on the United States, it is the policy of the Congress to encourage the geographical dispersal of the industrial facilities of the United States in the interest of the national defense, and to discourage the concentration of such productive facilities within limited geographical areas which are vulnerable to attack by an enemy of the United States. In the construction of any Government-owned industrial facilities, in the rendition of any Government financial assistance for the construction, expansion, or improvement of any industrial facilities, and in the procurement of goods and services, under this or any other Act, each department and agency of the Executive Branch shall apply, under the coordination of the Office of Defense Mobilization, when practicable and consistent with existing law and the desirability for maintaining a sound economy, the principle of the geographical dispersal of such facilities in the interest of national defense. Nothing contained in this paragraph shall preclude the use of existing industrial facilities.

## TITLE I—PRIORITIES AND ALLOCATION

SEC. 101. (a) The President is hereby authorized (1) to require that performance under contracts or orders (other than contracts of employment) which he deems necessary or appropriate to promote the national defense shall take priority over performance under any other contract or order, and for the purpose of assuring such priority, to require acceptance and performance of such contracts or orders in preference to other contracts or orders by any person he finds to be capable of their performance, and (2) to allocate materials and facilities in such manner, upon such conditions, and to such extent as he shall deem necessary or appropriate to promote the national defense.

(b) The powers granted in this section shall not be used to control the general distribution of any material in the civilian market unless the President finds (1) that such material is a scarce and critical material essential to the national defense, and (2) that the requirements of the national defense for such material cannot otherwise be met without creating a significant dislocation of the normal distribution of such material in the civilian market to such a degree as to create appreciable hardship.

SEC. 102. In order to prevent hoarding, no person shall accumulate (1) in excess of the reasonable demands of business, personal, or home consumption, or (2) for the purpose of resale at prices in excess of prevailing market prices, materials which have been designated by the President as scarce materials or materials the supply of which would be threatened by such accumulation. The President shall order published in the Federal Register, and in such other manner as he may deem appropriate, every designation of materials the accumulation of which is unlawful and any withdrawal of such designation. In making such designations the President may prescribe such conditions with respect to the accumulation of materials in excess of the reasonable demands of business, personal, or home consumption as he deems necessary to carry out the objectives of this Act. This section shall not be construed to limit the authority contained in sections 101 and 704 of this Act.

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[2] Terminated June 30, 1953.
[3] Terminated April 30, 1953.

SEC. 103. Any person who willfully performs any act prohibited, or willfully fails to perform any act required, by the provisions of this title or any rule, regulation, or order thereunder, shall, upon conviction, be fined not more than $10,000 or imprisoned for not more than one year, or both.

SEC. 104. IMPORT CONTROLS. Terminated at the close of June 30, 1953, by section 11, 1953, amendments.

## TITLE II—AUTHORITY TO REQUISITION AND CONDEMN

Terminated at the close of June 30, 1953, by section 11, 1953 amendments.

## TITLE III—EXPANSION OF PRODUCTIVE CAPACITY AND SUPPLY

SEC. 301. (a) In order to expedite production and deliveries or services under Government contracts, the President may authorize, subject to such regulations as he may prescribe, the Department of the Army, the Department of the Navy, the Department of the Air Force, theDepartment of Commerce, and such other agencies of the United States engaged in procurement for the national defense as he may designate (hereinafter referred to as "guaranteeing agencies"), without regard to provisions of law relating to the making, performance, amendment, or modification of contracts, to guarantee in whole or in part any public or private financing institution (including any Federal Reserve bank), by commitment to purchase, agreement to share losses, or otherwise, against loss of principal or interest on any loan, discount, or advance, or on any commitment in connection therewith, which may be made by such financing institution for the purpose of financing any contractor, subcontractor, or other person in connection with the performance of any contract or other operation deemed by the guaranteeing agency to be necessary to expedite production and deliveries or services under Government contracts for the procurement of materials or the performance of services for the national defense, or for the purpose of financing any contractor, subcontractor, or other person in connection with or in contemplation of the termination, in the interest of the United States, of any contract made for the national defense; but no small-business concern (as defined in section 714 (a) (1) of this Act) shall be held ineligible for the issuance of such a guaranty by reason of alternative sources of supply.

(b) Any Federal agency or any Federal Reserve bank, when designated by the President, is hereby authorized to act, on behalf of any guaranteeing agency, as fiscal agent of the United States in the making of such contracts of guarantee and in otherwise carrying out the purposes of this section. All such funds as may be necessary to enable any such fiscal agent to carry out any guarantee made by it on behalf of any guaranteeing agency shall be supplied and disbursed by or under authority from such guaranteeing agency. No such fiscal agent shall have any responsibility or accountability except as agent in taking any action pursuant to or under authority of the provisions of this section. Each such fiscal agent shall be reimbursed by each guaranteeing agency for all expenses and losses incurred by such fiscal agent in acting as agent on behalf of such guaranteeing agency, including among such expenses, notwithstanding any other provision of law, attorneys' fees and expenses of litigation.

(c) All actions and operations of such fiscal agents under authority of or pursuant to this section shall be subject to the supervision of the President, and to such regulations as he may prescribe; and the President is authorized to prescribe, either specifically or by maximum limits or otherwise, rates of interest, guarantee and commitment fees, and other charges which may be made in connection with loans, discounts, advances, or commitments guaranteed by the guaranteeing agencies through such fiscal agents, and to prescribe regulations governing the forms and procedures (which shall be uniform to the extent practicable) to be utilized in connection with such guarantees.

(d) Each guaranteeing agency is hereby authorized to use for the purposes of this section any funds which have heretofore been appropriated or allocated or which hereafter may be appropriated or allocated to it, or which are or may become available to it, for such purposes or for the purpose of meeting the necessities of the national defense.

SEC. 302. To expedite production and deliveries or services to aid in carrying out Government contracts for the procurement of materials or the performance of services for the national defense, the President may make provision for loans (including participations, or guarantees of, loans) to private business enter-

prises (including research corporations not organized for profit) for the expansion of capacity, the development of technological processes, or the production of essential materials, including the exploration, development, and mining of strategic and critical metals and minerals, and manufacture of newsprint. Such loans may be made without regard to the limitations of existing law and on such terms and conditions as the President deems necessary, except that financial assistance may be extended only to the extent that it is not otherwise available on reasonable terms.

SEC. 303. (a) To assist in carrying out the objectives of this Act, the President may make provision (1) for purchases of or commitments to purchase metals, minerals, and other materials, for Government use or resale; and (2) for the encouragement of exploration, development, and mining of critical and strategic minerals and metals: *Provided, however*, That purchases for resale under this subsection shall not include that part of the supply of an agricultural commodity which is domestically produced except insofar as such domestically produced supply may be purchased for resale for industrial uses or stockpiling, and no commodity purchased under this subsection shall be sold at less than the established ceiling price for such commodity (except that minerals and metals shall not be sold at less than the established ceiling price, or the current domestic market price, whichever is lower), or, if no ceiling price has been established, the higher of the following: (i) The current domestic market price for such commodity, or (ii) the minimum sale price established for agricultural commodities owned or controlled by the Commodity Credit Corporation as provided in section 407 of Public Law 439, 81st Congress: *Provided further, however*, That no purchase or commitment to purchase any imported agricultural commodity shall be made calling for delivery more than one year after the expiration of this act.

(b) Subject to the limitations in subsection (a), purchases and commitments to purchase and sales under such subsection may be made without regard to the limitations of existing law, for such quantities, and on such terms and conditions, including advance payments, and for such periods, but not extending beyond June 30, 1965, as the President deems necessary, except that purchases or commitments to purchase involving higher than established ceiling prices (or if there be no established ceiling prices, currently prevailing market prices) or anticipated loss on resale shall not be made unless it is determined that supply of the materials could not be effectively increased at lower prices or on terms more favorable to the Government, or that such purchases are necessary to assure the availability to the United States of overseas supplies.

(c) If the Presidents finds—

(1) that under generally fair and equitable ceiling prices for any raw or nonprocessed material, there will result a decrease in supplies from high-cost sources of such material, and that the continuation of such supplies is necessary to carry out the objectives of the act; or

(2) that an increase in cost of transportation is temporary in character and threatens to impair maximum production or supply in any area at stable prices of any materials,

he may make provision for subsidy payments on any such domestically produced material other than an agricultural commodity in such amounts and in such manner (including purchases of such material and its resale at a loss without regard to the limitations of existing law), and on such terms and conditions, as he determines to be necessary to insure that supplies from such high-cost sources are continued, or that maximum production or supply in such area at stable prices of such materials is maintained, as the case may be.

(d) The procurement power granted to the President by this section shall include the power to transport and store and have processed and refined, any materials procured under this section.

(e) When in his judgment it will aid the national defense, the President is authorized to install additional equipment, facilities, processes, or improvements to plants, factories, and other industrial facilities owned by the United States Government, and to install Government owned equipment in plants, factories, and other industrial facilities owned by private persons.

(f) Notwithstanding any other provision of law to the contrary, metals, minerals, and materials acquired pursuant to the provisions of this section which, in the judgment of the President, are excess to the needs of programs under this act, shall be transferred to the national stockpile established pursuant to the act of June 7, 1939, as amended (50 U.S.C. 98–98h), when the President deems such action to be in the public interest.

Transfers made pursuant to this subsection shall be made without charge against or reimbursement from funds available under such act of June 7, 1939, as amended, except that costs incident to such transfer other than acquisition costs shall be paid or reimbursed from such funds, and the acquisition costs of such metals, minerals, and materials transferred shall be deemed to be net losses incurred by the transferring agency and the notes payable issued to the Secretary of the Treasury representing the amounts thereof shall be canceled. Upon the cancellation of any such notes the aggregate amount of borrowing which may be outstanding at any one time under section 304(b) of this act, as amended, shall be reduced in an amount equal to the amount of any notes so canceled.

(g) When in his judgment it will aid the national defense, and upon a certification by the Secretary of Agriculture or the Secretary of the Interior that a particular strategic and critical material is likely to be in short supply in time of war or other national emergency, the President may make provision for the development of substitutes for such strategic and critical materials.

SEC. 304. (a) For the purposes of sections 302 and 303, the President is hereby authorized to utilize such existing departments, agencies, officials, or corporations of the Government as he may deem appropriate, or to create new agencies (other than corporations).

(b) Any agency created under this section, and any department, agency, official, or corporation utilized pursuant to this section is authorized, subject to the approval of the President, to borrow from the Treasury of the United States, such sums of money as may be necessary to carry out its functions under sections 302 and 303: *Provided*, That the amount borrowed under the provisions of this section by all such borrowers shall not exceed an aggregate of $2,100,000,000 outstanding at any one time: *Provided further*, That when any contract, agreement, loan, or other transaction heretofore or hereafter entered into pursuant to section 302 or 303 imposes contingent liability upon the United States, such liability shall be considered for the purposes of sections 3679 and 3732 of the Revised Statutes, as amended, as an obligation only to the extent of the probable ultimate net cost to the United States under such transaction; and the President shall submit a report to the Congress not less often than once each quarter setting forth the gross amount of each such transaction entered into by any agency of the U.S. Government under this authority and the basis for determining the probable ultimate net cost to the United States thereunder. For the purpose of borrowing as authorized by this subsection, the borrower may issue to the Secretary of the Treasury its notes, debentures, bonds, or other obligations to be redeemable at its option before maturity in such manner as may be stipulated in such obligations. Such obligations shall bear interest at a rate determined by the Secretary of the Treasury, taking into consideration the current average rate on outstanding marketable obligations of the United States as of the last day of the month preceding the issuance of the obligations. The Secretary of the Treasury is authorized and directed to purchase such obligations and for such purpose the Secretary of the Treasury is authorized to use as a public-debt transaction the proceeds from the sale of any securities issued under the Second Liberty Bond Act, as amended, and the purposes for which securities may be issued under the Second Liberty Bond Act, as amended, are extended to include any purchases of obligations hereunder.

## TITLE IV—PRICE AND WAGE STABILIZATION

Terminated at the close of April 30, 1953, by section 11, 1953 amendments.

## TITLE V—SETTLEMENT OF LABOR DISPUTES

Terminated at the close of April 30, 1953, by section 11, 1953 amendments.

## TITLE VI—CONTROL OF REAL ESTATE CREDIT

Terminated at the close of June 30, 1953, by section 11, 1953 amendments.

## TITLE VII—GENERAL PROVISIONS

SEC. 701. (a) It is the sense of the Congress that small-business enterprises be encouraged to make the greatest possible contribution toward achieving the objectives of this Act.

(b) In order to carry out this policy—

(i) the President shall provide small-business enterprises with full information concerning the provisions of this Act relating to, or of benefit to, such enterprises and concerning the activities of the various departments and agencies under this Act;

(ii) such business advisory committees shall be appointed as shall be appropriate for purposes of consultation in the formulation of rules, regulations, or orders, or amendments thereto issued under authority of this Act, and in their formation there shall be fair representation for independent small, for medium, and for large business enterprises, for different geographical areas, for trade association members and nonmembers, and for different segments of the industry;

(iii) in administering this Act, such exemptions shall be provided for small-business enterprises as may be feasible without impeding the accomplishment of the objectives of this Act; and

(iv) in administering this Act, special provision shall be made for the expeditious handling of all requests, applications, or appeals from small-business enterprises.

(c) Whenever the President invokes the powers given him in this Act to allocate any material in the civilian market, he shall do so in such a manner as to make available, so far as practicable, for business and various segments thereof in the normal channel of distribution of such material, a fair share of the available civilian supply based, so far as practicable, on the share received by such business under normal conditions during a representative period preceding any future allocation of materials: *Provided*, That the President shall, in the allocation of materials in the civilian market, give due consideration to the needs of new concerns and newly acquired operations, undue hardships of individual businesses, and the needs of smaller concerns in an industry.

(d) In order to further the objectives and purposes of this section, the Office of Defense Mobilization is directed to investigate the distribution of defense contracts with particular reference to the share of such contracts which has gone and is now going to small business, either directly or by subcontract; to review the policies, procedures, and administrative arrangements now being followed in order to increase participation by small business in the mobilization program; to explore all practical ways, whether by amendments to laws, policies, regulations, or administrative arrangements, or otherwise, to increase the share of defense procurement going to small business; to get from the departments and agencies engaged in procurement, and from other appropriate agencies including the Small Business Administration, their views and recommendations on ways to increase the share of procurements going to small business; and to make a report to the President and the Congress, not later than six months after the enactment of the Defense Production Act Amendments of 1955, which report shall contain the following: (i) a full statement of the steps taken by the Office of Defense Mobilization in making investigations required by this subsection; (ii) the findings of the Office of Defense Mobilization with respect to the share of procurement which has gone and is now going to small business; (iii) a full and complete statement of the actions taken by the Office of Defense Mobilization and other agencies to increase such small business share; (iv) a full and complete statement of the recommendations made by the procurement agencies and other agencies consulted by the Office of Defense Mobilization; and (v) specific recommendations by the Office of Defense Mobilization for further action to increase the share of procurement going to small business.

SEC. 702. As used in this Act—

(a) The word "person" includes an individual, corporation, partnership, association, or any other organized group of persons, or legal successor or representative of the foregoing, and includes the United States or any agency thereof, or any other government, or any of its political subdivisions, or any agency of any of the foregoing: *Provided*, That no punishment provided by this Act shall apply to the United States, or to any such government, political subdivision, or government agency.

(b) The word "materials" shall include raw materials, articles, commodities, products, supplies, components, technical information, and processes.

(c) The word "facilities" shall not include farms, churches or other places of worship, or private dwelling houses.

(d) The term "national defense" means programs for military and atomic energy production or construction, military assistance to any foreign nation, stockpiling, and directly related activity.

(e) The words "wages, salaries, and other compensation" shall include all forms of remuneration to employees by their employers for personal services, including, but not limited to, vacation and holiday payments, night shift and other bonuses, incentive payments, year-end bonuses, employer contributions to or payments of insurance or welfare benefits, employer contributions to a pension fund or annuity, payments in kind, and premium overtime payments.

SEC. 703. (a) Except as otherwise specifically provided, the President may delegate any power or authority conferred upon him by this Act to any officer or agency of the Government, including any new agency or agencies (and the President is hereby authorized to create such new agencies, other than corporate agencies, as he deems necessary), and he may authorize such redelegations by that officer or agency as the President may deem appropriate. The President is authorized to appoint heads and assistant heads of any such new agencies, and other officials therein of comparable status, and to fix their compensation, without regard to the Classification Act of 1949, as amended, the head of one such agency to be paid at a rate comparable to the compensation paid to the heads of executive departments of the Government, and other such heads, assistant heads, and officials at rates comparable to the compensation paid to the heads and assistant heads of independent agencies of the Government. Any officer or agency may employ civilian personnel for duty in the United States, including the District of Columbia, or elsewhere, without regard to section 14 of the Federal Employees Pay Act of 1946 (60 Stat. 219) as the President deems necessary to carry out the provisions of this Act.

(b) The head and assistant heads of any independent agency created to administer the authority conferred by title IV of this Act shall be appointed by the President, by and with the advice and consent of the Senate. There shall be included among the policymaking officers of each regional office administering the authority conferred by title IV of this Act a resident of each State served by such office whose Governor requests such representation.

SEC. 704. The President may make such rules, regulations, and orders as he deems necessary or appropriate to carry out the provisions of this Act. Any regulation or order under this Act may be established in such form and manner, may contain such classifications and differentiations, and may provide for such adjustments and reasonable exceptions as in the judgment of the President are necessary or proper to effectuate the purposes of this Act, or to prevent circumvention or evasion, or to facilitate enforcement of this Act, or any rule, regulation, or order issued under this Act. No rule, regulation, or order issued under this Act which restricts the use of natural gas (either directly or by restricting the use of facilities for the consumption of natural gas, or in any other manner) shall apply in any State in which a public regulatory agency has authority to restrict the use of natural gas and certifies to the President that it is exercising that authority to the extent necessary to accomplish the objectives of this Act.

SEC. 705. (a) The President shall be entitled, while this Act is in effect and for a period of two years thereafter, by regulation, subpena, or otherwise, to obtain such information from, require such reports and the keeping of such records by, make such inspection of the books, records, and other writings, premises or property of, and take the sworn testimony of, and administer oaths and affirmations to, any person as may be necessary or appropriate, in his discretion, to the enforcement or the administration of this Act and the regulations or orders issued thereunder. The President shall issue regulations insuring that the authority of this subsection will be utilized only after the scope and purpose of the investigation, inspection, or inquiry to be made have been defined by competent authority, and it is assured that no adequate and authoritative data are available from any Federal or other responsible agency. In case of contumacy by, or refusal to obey a subpena served upon, any person referred to in this subsection, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the President, shall have jurisdiction to issue an order requiring such person to appear and give testimony or to appear and produce documents, or both; and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) No person shall be excused from complying with any requirement under this section or from attending and testifying or from producing books, papers, documents, and other evidense in obedience to a subpena before any grand jury or in any court or administrative proceeding based upon or growing out of any alleged violation of this Act on the ground that the testimony or evidence, docu-

mentary or otherwise, required of him may tend to incriminate him or subject him to penalty or forfeiture; but no natural person shall be prosecuted or subjected to any penalty or forfeiture in any court, for or on account of any transaction, matter, or thing concerning which he is so compelled, after having claimed his privilege against self-incrimination, to testify or produce evidence, documentary or otherwise, except that such natural person so testifying shall not be exempt from prosecution and punishment for perjury committed in so testifying: *Provided*, That the immunity granted herein from prosecution and punishment and from any penalty or forfeiture shall not be construed to vest in any individual any right to priorities assistance, to the allocation of materials, or to any other benefit which is within the power of the President to grant under any provision of this Act.

(c) The production of a person's books, records, or other documentary evidence shall not be required at any place other than the place where such person usually keeps them, if prior to the return date specified in the regulations, subpena, or other document issued with respect thereto, such person furnishes the President with a true copy of such books, records, or other documentary evidence (certified by such person under oath to be a true and correct copy) or enters into a stipulation with the President as to the information contained in such books, records, or other documentary evidence. Witnesses shall be paid the same fees and mileage that are paid witnesses in the courts of the United States.

(d) Any person who willfully performs any act prohibited or willfully fails to perform any act required by the above provisions of this section, or any rule, regulation, or order thereunder, shall upon conviction be fined not more than $1,000 or imprisoned for not more than one year or both.

(e) Information obtained under this section which the President deems confidenial or with reference to which a request for confidential treatment is made by the person furnishing such information shall not be published or disclosed unless the President determines that the withholding thereof is contrary to the interest of the national defense, and any person willfully violating this provision shall, upon conviction, be fined not more than $10,000, or imprisoned for not more than one year, or both.

All information obtained by the Office of Price Stabilization under this section 705, as amended, and not made public prior to April 30, 1953, shall be deemed confidential and shall not be published or disclosed, either to the public or to another Federal agency except the Congress or any duly authorized committee thereof, and except the Department of Justice for such use as it may deem necessary in the performance of its functions, unless the President determines that the withholding thereof is contrary to the interests of the national defense, and any person willfully violating this provision shall, upon conviction, be fined not more than $10,000 or imprisoned for not more than one year, or both.

(f) Any person subpenaed under this section shall have the hight to make a record of his testimony and to be represented by counsel.

SEC. 706. (a) Whenever in the judgement of the President any person has engaged or is about to engage in any acts or practices which constitute or will constitute a violation of any provision of this Act, he may make application to the appropriate court for an order enjoining such acts or practices, or for an order enforcing compliance with such provision, and upon a showing by the President that such person has engaged or is about to engage in any such acts or practices a permanent or temporary injunction, restraining order, or other order, with or without such injunction or restraining order, shall be granted without bond.

(b) The district courts of the United States and the United States courts of any Territory or other place subject to the jurisdiction of the United States shall have jurisdiction of violations of this Act or any rule, regulation, order, or subpena thereunder, and of all civil actions under this Act to enforce any liability or duty created by, or to enjoin any violation of, this Act or any rule, regulation, order, or subpena thereunder. Any criminal proceeding on account of any such violation may be brought in any district in which any act, failure to act, or transaction constituting the violation occurred. Any such civil action may be brought in any such district or in the district in which the defendant resides or transacts business. Process in such cases, criminal or civil, may be served in any district wherein the defendant resides or transacts business or wherever the defendant may be found; the subpena for witnesses who are required to attend a court in any district in such case may run into any other district. The termination of the authority granted in any title or section of this Act, or of any rule, regulation, or order issued thereunder, shall not operate to

defeat any suit, action, or prosecution, whether theretofore or thereafter commenced, with respect to any right, liability, or offense incurred or committed prior to the termination date of such title or of such rule, regulation, or order. No costs shall be assessed against the United States in any proceeding under this Act. All litigation arising under this Act or the regulations promulgated thereunder shall be under the supervision and control of the Attorney General.

SEC. 707. No person shall be held liable for damages or penalties for any act or failure to act resulting directly or indirectly from compliance with a rule, regulation, or order issued pursuant to this Act notwithstanding that any such rule, regulation, or order shall thereafter be declared by judicial or other competent authority to be invalid. No person shall discriminate against orders or contracts to which priority is assigned or for which materials or facilities are allocated under title I of this Act or under any rule, regulation, or order issued thereunder, by charging higher prices or by imposing different terms and conditions for such orders or contracts than for other generally comparable orders or contracts, or in any other manner.

SEC. 708. (a) The President is authorized to consult with representatives of industry, business, financing, agriculture, labor, and other interests, with a view to encouraging the making by such persons with the approval by the President of voluntary agreements and programs to further the objectives of this Act.

(b) No act or omission to act pursuant to this Act which occurs while this Act is in effect, if requested by the President pursuant to a voluntary agreement or program approved under subsection (a) and found by the President to be in the public interest as contributing to the national defense shall be construed to be within the prohibition of the antitrust laws or the Federal Trade Commission Act of the United States: *"Provided, however,* That after the enactment of the Defense Production Act Amendments of 1955, the exemption from the prohibitions of the antitrust laws and the Federal Trade Commission Act of the United States shall apply only (1) to acts and omissions to act requested by the President or his duly authorized delegate pursuant to duly approved voluntary agreements or programs relating solely to the exchange between actual or prospective contractors of technical or other information, production techniques, and patents or patent rights, relating to equipment used primarily by or for the military which is being procured by the Department of Defense or any department thereof, and the exchange of materials, equipment, and personnel to be used in the production of such equipment; and (2) to act and omissions to act requested by the President or his duly authorized delegate pursuant to voluntary agreements or programs which were duly approved under this section before the enactment of the Defense Production Act Amendments of 1955. The Attorney General shall review each of the voluntary agreements and programs covered by this section, and the activities being carried on thereunder, and, if he finds after such review and after consultation with the Director of the Office of Defense Mobilization and other interested agencies, that the adverse effects of any such agreement or program on the competitive free-enterprise system outweigh the benefits of the agreement or program to the national defense, he shall withdraw his approval in accordance with subsection (d) of this section. This review and determination shall be made within ninety days after the enactment of the Defense Production Act Amendments of 1955.

A copy of each such request intended to be within the coverage of this section, and any modification or withdrawal thereof, shall be furnished to the Attorney General and the Chairman of the Federal Trade Commission when made, and it shall be published in the Federal Register unless publication thereof would, in the opinion of the President, endanger the national security.

(c) The authority granted in subsection (b) shall be delegated only (1) to officials who shall for the purpose of such delegation be required to be appointed by the President by and with the advice and consent of the Senate, unless otherwise required to be so appointed, and (2) upon the condition that such officials consult with the Attorney General and with the Chairman of the Federal Trade Commission not less than ten days before making any request or finding thereunder, and (3) upon the condition that such officials obtain the approval of the Attorney General to any request thereunder before making the request. For the purpose of carrying out the objectives of title I of this Act, the authority granted in subsection (b) of this section shall not be delegated except to a single official of the Government.

(d) Upon withdrawal of any request or finding made hereunder, or upon withdrawal by the Attorney General of his approval of the voluntary agree-

ment or program on which the request or finding is based, the provisions of this section shall not apply to any subsequent act or omission to act by reason of such finding or request.

(e) The Attorney General is directed to make, or request the Federal Trade Commission to make for him, surveys for the purpose of determining any factors which may tend to eliminate competition, create or strengthen monopolies, injure small business, or otherwise promote undue concentration of economic power in the course of the administration of this Act. Such surveys, and the reports hereafter required, shall include studies of the voluntary agreements and programs authorized by this section. The Attorney General shall submit to the Congress and the President within ninety days after the approval of this Act, and at least once every three months, reports setting forth the results of such surveys and including such recommendations as he may deem desirable.

(f) After the date of enactment of the Defense Production Act Amendments of 1952, no voluntary program or agreement for the control of credits shall be approved or carried out under this section.

SEC. 709. The functions exercised under this Act shall be excluded from the operation of the Administrative Procedure Act (60 Stat. 237) except as to the requirements of section 3 thereof. Any rule, regulation, or order, or amendment thereto, issued under authority of this Act shall be accompanied by a statement that in the formulation thereof there has been consultation with industry representatives, including trade association representatives, and that consideration has been given to their recommendations, or that special circumstances have rendered such consultation impracticable or contrary to the interest of the national defense, but no such rule, regulation, or order shall be invalid by reason of any subsequent finding by judicial or other authority that such a statement is inaccurate.

SEC. 710. (a) Repealed by section 505(c)(1) of the Act of June 28, 1955 (69 Stat. 180).

(b)(1) The President is further authorized, to the extent he deems it necessary and appropriate in order to carry out the provisions of this Act, and subject to such regulations as he may issue, to employ persons of outstanding experience and ability without compensation;

(2) The President shall be guided in the exercise of the authority provided in this subsection by the following policies:

(i) So far as possible, operations under the Act shall be carried on by full-time, salaried employees of the Government, and appointments under this authority shall be to advisory or consultative positions only.

(ii) Appointments to positions other than advisory or consultative may be made under this authority only when the requirements of the position are such that the incumbent must personally possess outstanding experience and ability not obtainable on a full-time, salaried basis.

(iii) In the appointment of personnel and in assignment of their duties, the head of the department or agency involved shall take steps to avoid, to as great an extent as possible, any conflict between the governmental duties and the private interests of such personnel.

(3) Appointees under this subsection (b) shall, when policy matters are involved, be limited to advising appropriate full-time salaried Government officials who are responsible for making policy decisions.

(4) Any person employed under this subsection (b) is hereby exempted, with respect to such employment, from the operation of sections 281, 283, 284, 434, and 1914 of title 18, United States Code, and section 190 of the Revised Statutes (5 U.S.C. 99), except that—

(i) exemption hereunder shall not extend to the negotiation or execution, by such appointee, of Government contracts with the private employer of such appointee or with any corporation, joint stock company, association, firm, partnership, or other entity in the pecuniary profits or contracts of which the appointee has any direct or indirect interest;

(ii) exemption hereunder shall not extend to making any recommendation or taking any action with respect to individual applications to the Government for relief or assistance, on appeal or otherwise, made by the private employer of the appointee or by any corporation, joint stock company, association, firm, partnership, or other entity in the pecuniary profits or contracts of which the appointee has any direct or indirect interest;

(iii) exemption hereunder shall not extend to the prosecution by the appointee, or participation by the appointee in any fashion in the prosecution, of any claims against the Government involving any matter concerning which

the appointee had any responsibility during his employment under this subsection, during the period of such employment and the further period of two years after the termination of such employment; and

(iv) exemption hereunder shall not extend to the receipt or payment of salary in connection with the appointee's Government service hereunder from any source other than the private employer of the appointee at the time of his appointment hereunder.

(5) Appointments under this subsection (b) shall be supported by written certification by the head of the employing department or agency—

(i) that the appointment is necessary and appropriate in order to carry out the provisions of the Act;

(ii) that the duties of the position to which the appointment is being made require outstanding experience and ability;

(iii) that the appointee has the outstanding experience and ability required by the position; and

(iv) that the department or agency head has been unable to obtain a person with the qualifications necessary for the position on a full-time, salaried basis.

(6) The heads of the departments or agencies making appointments under this subsection (b) shall file with the Division of the Federal Register for publication in the Federal Register a statement including the name of the appointee, the employing department or agency, the title of his position, and the name of his private employer, and the appointee shall file with such Division for publication in the Federal Register a statement listing the names of any corporations of which he is an officer or director or within 60 days preceding his appointment has been an officer or director, or in which he owns, or within 60 days preceding his appointment has owned, any stocks, bonds, or other financial interests, and the names of any partnerships in which he is, or was within 60 days preceding his appointment, a partner, and the names of any other businesses in which he owns, or within such 60-day period has owned, any similar interest. At the end of each succeeding 6-month period, the appointee shall file with such Division for publication in the Federal Register a statement showing any changes in such interests during such period.

(7) At least once every 3 months the Chairman of the United States Civil Service Commission shall survey appointments made under this subsection and shall report his findings to the President and the Joint Committee on Defense Production and make such recommendations as he may deem proper.

(8) Persons appointed under the authority of this subsection may be allowed transportation and not to exceed $15 per diem in lieu of subsistence while away from their homes or regular places of business pursuant to such appointment.

(c) The President is authorized, to the extent he deems it necessary and appropriate in order to carry out the provisions of this Act, to employ experts and consultants or organizations thereof, as authorized by section 55a of title 5 of the United States Code. Individuals so employed may be compensated at rates not in excess of $50 per diem and while away from their homes or regular places of business they may be allowed transportation and not to exceed $15 per diem in lieu of subsistence and other expenses while so employed. The President is authorized to provide by regulation for the exemption of such persons from the operation of sections 281, 283, 284, 434, and 1914 of title 18 of the United States Code and section 190 of the Revised Statutes (5 U.S.C. 99).

(d) The President may utilize the services of Federal, State, and local agencies and may utilize and establish such regional, local, or other agencies, and utilize such voluntary and uncompensated services, as may from time to time be needed; and he is authorized to provide by regulation for the exemption of persons whose services are utilized under this subsection from the operation of sections 281, 283, 284, 434, and 1914 of title 18 of the United States Code and section 190 of the Revised Statutes (5 U.S.C. 99).

(e) The President is further authorized to provide for the establishment and training of a nucleus executive reserve for employment in executive positions in Government during periods of emergency. Members of this executive reserve who are not full-time Government employees may be allowed transportation and not to exceed $15 per diem in lieu of subsistence while away from their homes or regular places of business for the purpose of participating in the executive reserve training program. The President is authorized to provide by regulation for the exemption of such persons who are not full-time Government employees from the operation of sections 281, 283, 284, 434, and 1914 of title 18 of the United States Code and section 190 of the revised Statutes (5 U.S.C. 99).

(f) Whoever, being an officer or employee of the United States or any department or agency thereof (including any Member of the Senate or House of Representatives), receives, by virtue of his office or employment, confidential information, and (1) uses such information in speculating directly or indirectly on any commodity exchange, or (2) discloses such information for the purpose of aiding any other person so to speculate, shall be fined not more than $10,000 or imprisoned not more than one year, or both. As used in this section, the term "speculate" shall not include a legitimate hedging transaction, or a purchase or sale which is accompanied by actual delivery of the commodity.

(g) The President, when he deems such action necessary, may make provision for the printing and distribution of reports, in such number and in such manner as he deems appropriate, concerning the actions taken to carry out the objectives of this Act.

SEC. 711. There are hereby authorized to be appropriated such sums as may be necessary and appropriate for the carrying out of the provisions and purposes of this Act by the President and such agencies as he may designate or create. Funds made available for the purposes of this Act may be allocated or transferred for any of the purposes of this Act, with the approval of the Bureau of the Budget, to any agency designated to assist in carrying out this Act. Funds so allocated or transferred shall remain available for such period as may be specified in the Acts making such funds available.

SEC. 712. (a) There is hereby established a joint congressional committee to be known as the Joint Committee on Defense Production (hereinafter referred to as the committee), to be composed of ten members as follows:

(1) Five members who are members of the Committee on Banking and Currency of the Senate, three from the majority and two from the minority party, to be appointed by the chairman of the committee; and

(2) Five members who are members of the Committee on Banking and Currency of the House of Representatives, three from the majority and two from the minority party, to be appointed by the chairman of the committee.

A vacancy in the membership of the committee shall be filled in the same manner as the original selection. The committee shall elect a chairman and a vice chairman from among its members, one of whom shall be a Member of the Senate and the other a Member of the House of Representatives.

(b) It shall be the function of the committee to make a continuous study of the programs and of the fairness to consumers of the prices authorized by this Act and to review the progress achieved in the execution and administration thereof. Upon request, the committee shall aid the standing committees of the Congress having legislative jurisdiction over any part of the programs authorized by this Act; and it shall make a report to the Senate and the House of Representatives, from time to time, concerning the results of its studies, toegther with such recommendations as it may deem desirable. Any department, official, or agency administering any of such programs shall, at the request of the committee, consult with the committee, from time to time, with respect to their activities under this Act.

(c) The committee, or any duly authorized subcommittee thereof, is authorized to hold such hearings, to sit and act at such times and places, to require by subpena (to be issued under the signature of the chairman or vice chairman of the committee) or otherwise the attendance of such witnesses and the production of such books, papers, and documents, to administer such oaths, to take such testimony, to procure such printing and binding, and to make such expenditures as it deems advisable. The cost of stenographic services to report such hearings shall not be in excess of 40 cents per hundred words. The provisions of sections 102 to 104, inclusive, of the Revised Statutes shall apply in case of any failure of any witness to comply with any subpena or to testify when summoned under authority of this subsection.

(d) The committee is authorized to appoint and, without regard to the Classification Act of 1949, as amended, fix the compensation of such experts, consultants, technicians, and organizations thereof, and clerical and stenographic assistants as it deems necessary and advisable.

(e) The expenses of the committee under this section, which shall not exceed $65,000 in any fiscal year, shall be paid from the contingent fund of the House of Representatives upon vouchers signed by the Chairman or Vice Chairman.

(f) The Secretary of Commerce shall make a special investigation and study of the production, allocation, distribution, use of nickel, of its resale as scrap and of other aspects of the current situation with respect to supply and marketing of nickel, with particular attention to, among other things, the adequacy of

the present system of nickel allocation between defense and civilian users. The Secretary of Commerce shall consult with the Joint Committee on Defense Production during the course of such investigation and study with respect to the progress achieved and the results of the investigation and study, and shall make an interim report on the results of the investigation and study on or before August 15, 1956, and shall, on or before December 31, 1956, make a final report on the results of such investigation and study, together with such recommendations as the Secretary of Commerce deems advisable. Such reports shall be made to the Senate (or to the Secretary of the Senate if the Senate is not in session) and to the House of Representatives (or to the Clerk of the House of Representatives if the House is not in session).

SEC. 713. The provisions of this Act shall be applicable to the United States, its Territories and possessions, and the District of Columbia.

SEC. 714. Terminated at the close of July 31, 1953. For purposes of section 301(a) of this Act, section 714(a)(1) defined a small-business concern thusly: "* * * a small-business concern shall be deemed to be one which is independently owned and operated and which is not dominant in its field of operation," and provided that, "The Administration, in making a detailed definition, may use these criteria, among others: independency of ownership and operation, number of employees, dollar volume of business, and nondominance in its field."

SEC. 715. If any provision of this Act or the application of such provision to any person or circumstances shall be held invalid, the remainder of the Act, and the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

SEC. 716. That no person may be employed under this Act who engages in a strike against the Government of the United States or who is a member of an organization of Government employees that asserts the right to strike against the Government of the United States, or who advocates, or who is a member of an organization that advocates, the overthrow of the Government of the United States by force or violence: *Provided*, That for the purposes hereof an affidavit shall be considered prima facie evidence that the person making the affidavit has not contrary to the provisions of this section engaged in a strike against the Government of the United States, is not a member of an organization of Government employees that asserts the right to strike against the Government of the United States or that such person does not advocate, and is not a member of an organization that advocates, the overthrow of the Government of the United States by force or violence: *Provided further*, That any person who engages in a strike against the Government of the United States or who is a member of an organization of Government employees that asserts the right to strike against the Government of the United States, or who advocates, or who is a member of an organization that advocates, the overthrow of the Government of the United States by force or violence and accepts employment the salary or wages for which are paid from any appropriation or fund contained in this Act shall be guilty of a felony and, upon conviction, shall be fined not more than $1,000 or imprisoned for not more than one year, or both: *Provided further*, That the above penalty clause shall be in addition to, and not in substitution for, any other provisions of existing law.

SEC. 717. (a) Title I (except section 104), title III, and title VII (except section 714) of this Act, and all authority conferred thereunder, shall terminate at the close of June 30, 1960. Section 714 of this Act, and all authority conferred thereunder, shall terminate at the close of July 31, 1953. Section 104, title II, and title VI of this Act, and all authority conferred thereunder shall terminate at the close of June 30, 1953. Title IV and V of this Act, and all authority conferred thereunder, shall terminate at the close of April 30, 1953.

(b) Notwithstanding the foregoing—

(1) The Congress by concurrent resolution or the President by proclamation may terminate this Act prior to the termination otherwise provided therefor.

(2) The Congress may also provide by concurrent resolution that any section of this Act and all authority conferred thereunder shall terminate prior to the termination otherwise provided therefor.

(3) Any agency created under this Act may be continued in existence for purposes of liquidation for not to exceed six months after the termination of the provision authorizing the creation of such agency.

(c) The termination of any section of this Act, or of any agency or corporation utilized under this Act, shall not affect the disbursement of funds under, or the carrying out of, any contract, guarantee, commitment or other obligation

entered into pursuant to this Act prior to the date of such termination, or the taking of any action necessary to preserve or protect the interests of the United States in any amounts advanced or paid out in carrying on operations under this Act, or the taking of any action (including the making of new guarantees) deemed by a guaranteeing agency to be necessary to accomplish the orderly liquidation, adjustment, or settlement of any loans guaranteed under this Act, including actions deemed necessary to avoid undue hardship to borrowers in reconverting to normal civilian production; and all of the authority granted to the President, guaranteeing agencies, and fiscal agents, under section 301 of this Act shall be applicable to actions taken pursuant to the authority contained in this subsection.

Notwithstanding any other provision of this Act, the termination of title VI or any section thereof shall not be construed as effecting any obligation, condition, liability, or restriction arising out of any agreement heretofore entered into pursuant to, or under the authority of, section 602 or section 605 of this Act, or any issuance thereunder, by any person or corporation and the Federal Government or any agency thereof relating to the provision of housing for defense workers or military personnel in an area designated as a critical defense housing area pursuant to law.

(d) No action for the recovery of any cooperative payment made to a cooperative association by a Market Administrator under an invalid provision of a milk marketing order issued by the Secretary of Agriculture pursuant to the Agricultural Marketing Agreement Act of 1937 shall be maintained unless such action is brought by producers specifically named as party plaintiffs to recover their respective share of such payments within ninety days after the date of enactment of the Defense Production Act Amendments of 1952 with respect to any cause of action heretofore accrued and not otherwise barred, or within ninety days after accrual with respect to future payments, and unless each claimant shall allege and prove (1) that he objected at the hearing to the provisions of the order under which such payments were made and (2) that he either refused to accept payments computed with such deduction or accepted them under protest to either the Secretary or the Administrator. The district courts of the United States shall have exclusive original jurisdiction of all such actions regardless of the amount involved. This subsection shall not apply to funds held in escrow pursuant to court order. Notwithstanding any other provision of this Act, no termination date shall be applicable to this subsection.

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